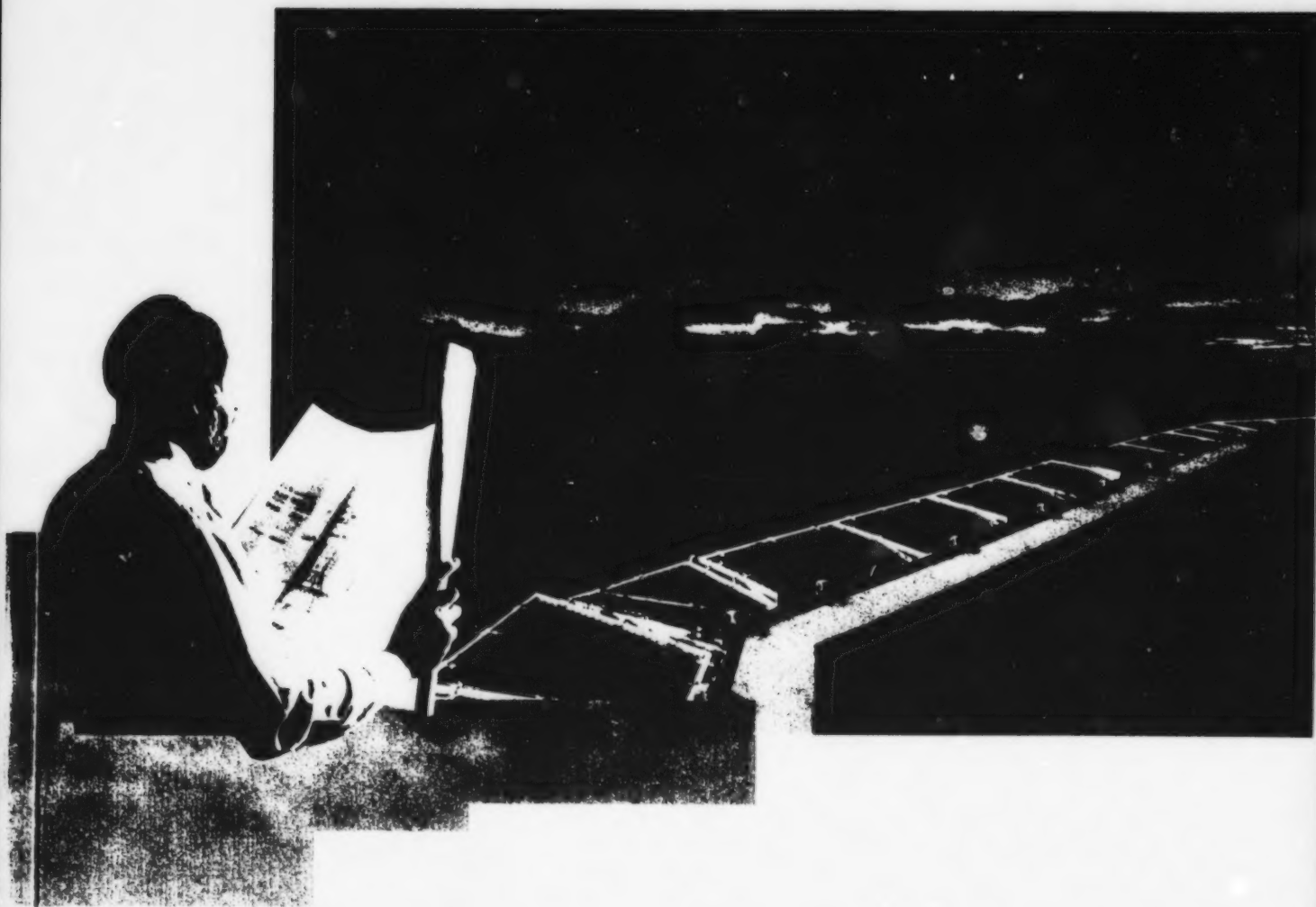




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Cover:
John Blomfield manages
Petro-Canada's task
force on development
of the Terra Nova off-
shore oilfield.

Petro-Canada is Canada's national energy corporation. Formed by an Act of Parliament in 1975, it is wholly owned by the Government of Canada. Operations began on January 1, 1976. Petro-Canada operates in a commercial fashion, competing in today's oil and gas industry on the same basis as other integrated energy companies. It is the largest Canadian-owned oil and gas company, with assets of over \$8.5 billion and revenue in 1988 of almost \$5 billion.

Petro-Canada has 7 373 employees organized into two operating divisions along with supporting "corporate" groups. Petro-Canada Resources, the "upstream" business, explores for, produces and markets crude oil, natural gas and natural gas liquids. The "downstream" business, Petro-Canada Products, refines, distributes and markets petroleum products and offers customers related goods and services.

On a typical day, Petro-Canada produces approximately 16 700 cubic metres of crude oil and field natural gas liquids and 13.7 million cubic metres of natural gas. The Corporation's straddle plants extract from pipeline natural gas an additional 6 400 cubic metres of natural gas liquids including ethane. Petro-Canada accounts for over 5.5 per cent of domestic oil and field natural gas liquids production and close to 6 per cent of domestic natural gas production. The Corporation operates more than 70 oil and gas production facilities in Western Canada.

At year-end 1988, Petro-Canada had proven reserves of crude oil and field natural gas liquids of 92.5 million cubic metres before royalties. These reserves include Petro-Canada's interests in the Syncrude and Wolf Lake oil sands projects. Proven reserves of natural gas amounted to 97.9 billion cubic metres before royalties.

Petro-Canada also has significant potential reserves off Canada's East Coast and in the oil sands areas of Alberta.

Petro-Canada holds interests in 12 crude oil, natural gas liquids and refined products pipelines. It is operator of nine pipelines with a total throughput capacity of 78 000 cubic metres per day.

The Corporation sells about 43 million litres of refined products to 600 000 Canadians each day. The Petro-Canada brand is the top-selling gasoline in the country, with over 19 per cent of the market. The Corporation offers a full range of high-quality, HydroTreated lubricants. A nationwide retail network comprises 3 429 outlets. Industrial and commercial customers are served through 34 terminals, 401 bulk plants and 118 Petro-Pass truck fuelling facilities.

Petro-Canada operates five refineries in Quebec, Ontario, Alberta and British Columbia, a lubricants plant in Ontario and an asphalt plant in Saskatchewan. With about 22 per cent of total Canadian refining capacity, these facilities can process 60 600 cubic metres of crude oil per day into a full range of high-quality petroleum products.

March 23, 1989

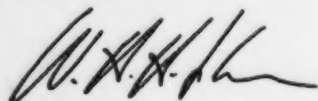
The Honourable
Jake Epp, P.C., M.P.
Minister
Energy, Mines and
Resources Canada
House of Commons
Ottawa, Ontario

Dear Minister:

On behalf of the Board of
Directors, I am pleased to
present Petro-Canada's
Annual Report for the fiscal
year ended December 31,
1988.

In accordance with the
provisions of the Financial
Administration Act, the
Report includes the
consolidated financial
statements together with the
auditors' report thereon.

Yours sincerely,



W. H. Hopper
Chairman of the Board
and Chief Executive Officer

HIGHLIGHTS

Financial	1988	1987
Earnings after extraordinary item and dividends on redeemable preferred shares (millions of dollars)	94	172
Cash generated from operations (millions of dollars)	613	778
Capital expenditures on property, plant and equipment (millions of dollars)	799	483
Cash flow return on average capital employed (per cent)	9.2	11.3
Return on average capital employed (per cent)	2.6	3.4
Return on average shareholder's equity (per cent)	3.0	4.7
Total assets (millions of dollars)	8 611	8 453
Shareholder's equity (millions of dollars)	3 915	3 872
Operating	1988	1987
Crude oil and field natural gas liquids daily production, net before royalties (thousands of cubic metres)	16.7	16.4
(thousands of barrels)	105	103
Natural gas daily production, net before royalties (millions of cubic metres)	13.7	12.3
(millions of cubic feet)	485	435
Crude oil processed per day (thousands of cubic metres)	48.5	48.4
(thousands of barrels)	305	304
Petroleum product sales per day (thousands of cubic metres)	43.8	45.6
(thousands of barrels)	276	287

THE YEAR IN BRIEF

- Consolidated earnings and cash flow down
- Exchange rates and low resource prices cut upstream results
- Downstream returns improve slightly
- Agreement-in-principle signed to develop Hibernia

During 1988, operations were directionally sound and well executed, but financial results were less than satisfactory. In the upstream, production of oil and natural gas liquids was maintained at last year's high level through investments in field development. Natural gas production and sales reached record levels, and it was a good exploration year in both oil and gas. Important agreements were signed that bode well for the Hibernia offshore oil development and the proposed OSLO oil sands project. In the downstream, initiatives in refining resulted in more effective operations.

In spite of all this, Petro-Canada's financial results were poorer than anticipated. This was largely due to the deterioration in crude oil prices in the second half of the year, the strength of the Canadian dollar and natural gas prices that fell to their lowest level in nine years. Even with the stability afforded by the Corporation's status as an integrated company, weak commodity prices hurt earnings and cash flow. Net earnings in 1988 were \$94 million after an extraordinary write-down of \$22 million, down 45 per cent from the previous year. Cash generated from operations totalled \$613 million, off 21 per cent from 1987.

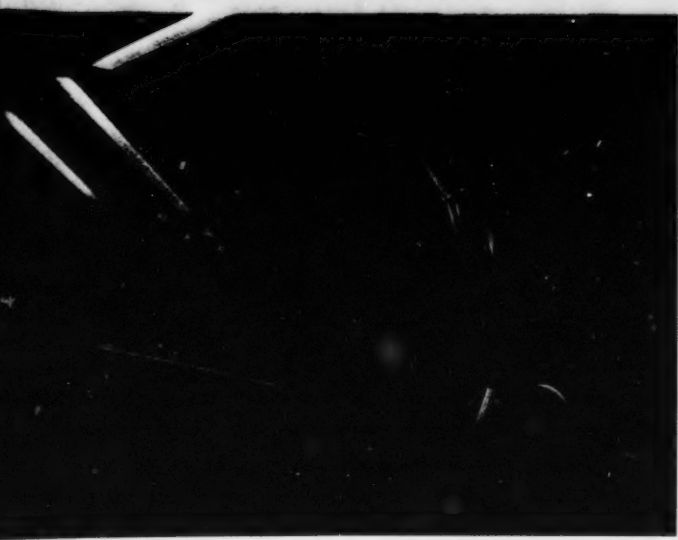
Our organization continued to pursue a series of strategies adopted after the oil price collapse in 1986. These directions are extensively discussed in this year's report, including the adjustments made in 1988 to reflect evolving conditions in the industry. To pursue attractive business opportunities in natural gas, commitments in exploration, development and marketing were strengthened and interests in several natural gas fields were purchased in the first half of the year. As a result, capital spending increased 65 per

cent to \$799 million. The subsequent weakening in world oil prices meant that capital expenditures for the year exceeded cash flow; however, this investment activity places Petro-Canada in a strong position to improve earnings in the medium term.

The latter part of 1988 was yet another reminder that our business environment is one of ongoing uncertainty. With the fundamentals of the oil and gas industry inextricably tied to a complex web of political, economic and social factors, our economists feel no comfort in their price forecasts. Toward the end of 1988, we revised downward our outlook for crude oil prices, and budgets for 1989 have been based on a price well below the average level for the previous year. We expect prices will strengthen significantly in the 1990s although the timing of such changes is far from clear.

In the light of this uncertainty, future investments must be continually re-evaluated. This is particularly true for the large, long-term upstream projects that develop relatively high-cost supplies. Natural gas prospects in North America appear to be good over the next few years with the dissipation of the continental supply surplus, although revenues will be held back by the slow rise in prices for competing fuels. Exploration for oil internationally offers the opportunity to participate in large, low-cost discoveries that Canadian-owned companies such as Petro-Canada can use to supplement domestic production and enhance growth.

After several years of poor profitability, the refining and marketing business also gives us cause for optimism. Gradually increasing product demand and product quality requirements will raise capacity utilization in refining. When combined with more focused marketing approaches, these trends should lead to higher profitability in the medium term. If realized,



these gains will allow Petro-Canada, as an integrated company, to offset any further weakness in upstream earnings with greater downstream profits.

The Corporation will remain particularly careful in managing its debt while oil prices remain weak. Should our shareholder opt for privatization, access to additional equity will ease the situation. In any event, prudent investment practices and effective cost controls will continue to be followed.

Over the year we watched closely some societal issues indirectly related to oil markets. For instance, there has been a tremendous growth in public concern about the physical environment. The Corporation has responded by strengthening its environmental policy and initiating programs such as the "Maximum" line of unleaded gasolines. The year was also notable for the nation's decision in favour of the U.S./Canada Free Trade Agreement. Petro-Canada will take full advantage of opportunities afforded by the Agreement, especially in natural gas marketing.

The constraints posed by weak crude prices have provided additional pressure to look within our organization and find ways to do things better. The Corporation has to ensure its employees are as motivated and as effective as possible. From the findings of a comprehensive employee survey, we put in motion programs that are improving management approaches and streamlining operating practices. The same principles have led our downstream division to begin adjust-

ing every part of its organization to focus on customers. This multi-year initiative will mean additional attention on the thousands of people across Canada who work in retail and wholesale outlets under the Petro-Canada banner. The objective is to strengthen sales by gaining and keeping more satisfied customers.

We recognize once again that it is our employees who provide the true value for our Corporation, and we salute their efforts under conditions that remain stressful and challenging because of the uncertain business environment. Regrettably, Petro-Canada lost two members of its senior management in early 1989. I would like to thank both David O'Brien and Bob Mayo for their invaluable contribution over many years.

There were changes to our Board of Directors during 1988, including the resignation in March of Rudolph Bratty and in May of Robin Abercrombie. I want to express my appreciation to both for their service on Petro-Canada's Board.

We continue to be gratified by the enduring success of the Olympic Torch Relay, which Petro-Canada sponsored and organized for the XV Olympic Winter Games. The event raised Petro-Canada's profile and confirmed for many the Corporation's ability to take on a major challenge and carry it through with distinction.



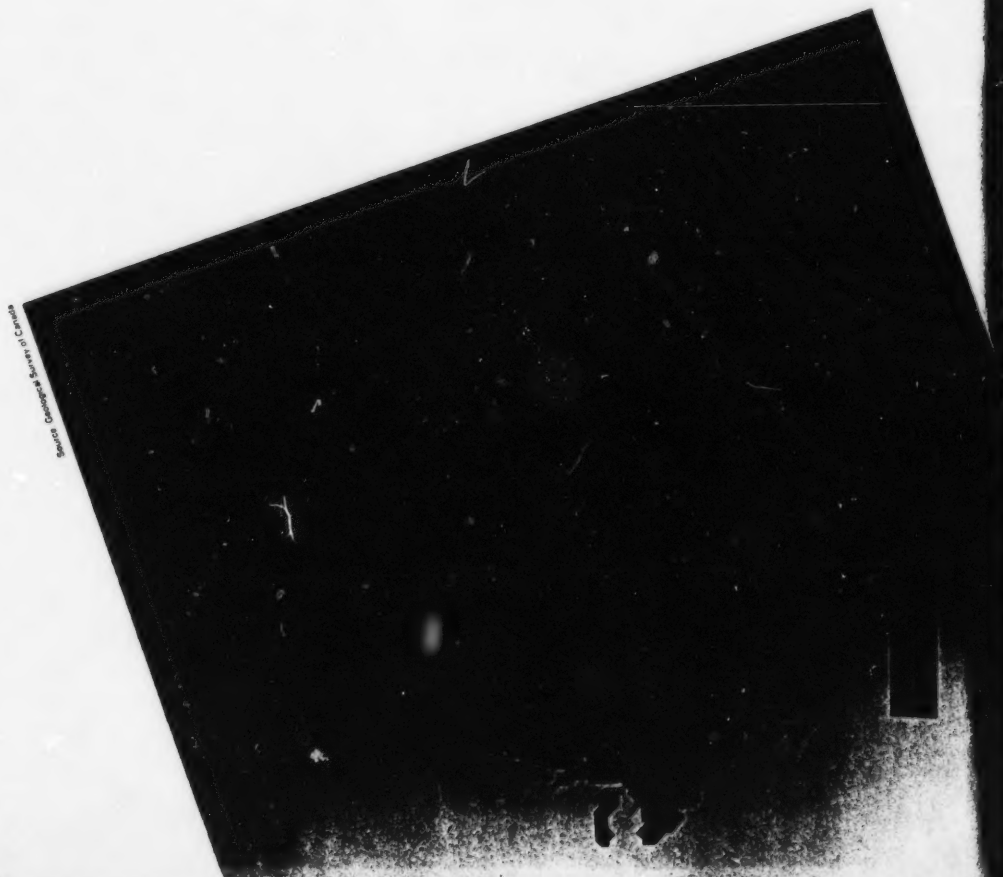
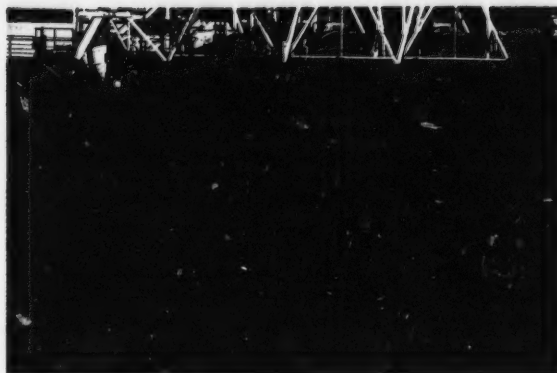
W. H. Hopper
Chairman of the Board
and Chief Executive Officer
March 23, 1989

East Coast Offshore Oil Development

Petro-Canada is among those industry leaders who see the East Coast offshore as the next major petroleum supply region for Canada. In 1988, an industry consortium that includes Petro-Canada signed a Statement of Principles with the federal and Newfoundland governments that should lead to construction of the massive Hibernia development, beginning shortly after the Binding Agreement is signed. The pro-

ject aims to bring oil ashore from the Grand Banks by the mid-1990s. With its partners, Petro-Canada also expects to produce the nearby Terra Nova discovery by about the same time.

Low oil prices over the last three years have added uncertainty to the timing of East Coast offshore projects. However, the Hibernia agreement shares the risks between governments and project sponsors, recognizing that the project may proceed under pricing expectations that leave much to be desired.



Ultimate technically recoverable resources, average expectation (millions of barrels)

- Eastern Canada Offshore
- Arctic Islands
- Beaufort Sea - Mackenzie Delta
- Western Canada Sedimentary Basin

Conventional oil becoming harder to find

Canada is currently a net exporter of oil. Yet that comforting fact obscures some disconcerting truths. The nation is a net importer of the light oil required by its refineries, while much of the crude exported is lower-value bitumen and heavy oil.

Production of conventional light crude oil from Western Canada can no longer meet national demand. Current daily production of 1.1 million barrels accounts for only 70% of total refinery feedstock requirements. And while these requirements are forecast by Ottawa's National Energy Board (NEB) to remain relatively flat for the next decade, conventional production is expected to decline rapidly.

There is still more conventional light oil to be found in Western Canada – some 3.6 billion barrels according to the Geological Survey of Canada. Most of it, however, lies in small, scattered pools that will become increasingly costly to find and develop. The Canadian Energy Research Institute calculates that crude oil finding costs in Alberta rose from \$5.53 per barrel in 1984 to \$7.28 in 1985 and \$9.23 in 1986 (three-year moving averages in 1986 dollars). This trend is expected to continue.

But Canada does have alternative sources of oil. The supply options include bitumen and synthetic crude from oil sands in northern Alberta, heavy oil in Saskatchewan and eastern Alberta, and oil fields

discovered in the frontiers, such as in the Beaufort Sea and off the East Coast.

Reserves from all of these areas may eventually be commercially produced to meet future needs. However, the size of the discoveries, the advanced stage of preparation toward development, and the economic feasibility within current price forecasts all point to the East Coast as the most likely first choice for development. Indeed, by the mid-1990s, the Grand Banks could provide 10 to 15% of Canada's light oil production. Hibernia's recoverable reserves have been estimated at approximately 525 million barrels. Encouraging results from Terra Nova delineation wells indicate the field could have probable reserves significantly higher than the current estimate of 132 million barrels.

A similar-sized field may exist at the nearby Whiterose East location, and the Ben Nevis, West Ben Nevis and Hebron discoveries also show development potential. To put these numbers into perspective, the largest Western Canada discovery announced in 1988, the Brassey field in northeastern B.C., was rated at about 20 million barrels of recoverable reserves.

Oil discoveries have been made off Nova Scotia, but the Cohasset and Panuke finds appear to be too small to produce profitably under the current price outlook.

Canadian refinery requirements will have to be met from additional sources as production of Western Canada conventional light oil declines (millions of barrels per day)



Source: Based on the National Energy Board's new price forecast

Assuming the financial risk

While the case for offshore oil is a good one, the steps needed to move from the drawing board to production are formidable. Project sponsors face decisions that carry tremendous consequences. Misjudgment could result in a crippling financial burden even for large companies, yet some of the criteria for decision making are virtually unpredictable.

The risks of megaproject development hinge on their immense scale, heavy front-end investments, long lead-times before production and technical uncertainties. Hibernia, for instance, will cost about \$5.2 billion to production start-up. Production and first revenues will not commence until six years after construction has started and more than a decade and a half after the discovery well. Time spans of this order present enormous risks because critical factors, most notably the price of oil, can change and alter the expected rate of return.

Petro-Canada estimates the average operating and capital cost of Hibernia production, over the life of the project, to be U.S. \$16 to 18 per barrel (1988 dollars). The NEB's low-end price forecast, adjusted to 1988 dollars, envisions approximately \$16 per barrel for West Texas Intermediate over

the next two to three years, about \$17 per barrel by 1995, when Hibernia is to begin production, and about \$19 by the end of the century. If actual prices match the NEB's low-end forecast, capital and operating costs for Hibernia would be covered. However, the complexities of OPEC politics make the world oil price too difficult to predict with much comfort. It must be recognized that a sustained downward trend could affect project timing or limit eventual profitability.

At this stage of megaproject development in Canada, and under current oil price expectations, government participation is essential for these projects to proceed. Governments help shoulder the risk in exchange for a share in the benefits. For Hibernia, the federal and Newfoundland governments have agreed to a complex package of fiscal incentives.

Risk sharing is critical

Even when the economics are favourable, the scale of megaprojects puts them beyond the scope of a single company or even an industry consortium acting alone. The heavy front-end investments, the time consumed in design, approvals and construction, the financial risks, the industrial opportunities and jobs that can be provided, and the environmental impacts that need to be addressed all require governments and industry to work closely together. For the petroleum industry, today's volatile world oil markets add a further dimension, leading governments and industry to risk-sharing agreements that protect their various interests.

Before a project can proceed, participating companies must seek to minimize risk by limiting their capital exposure. They must also recover their costs and receive an acceptable rate of return on invested capital.

Governments want oil production for energy security, an improved balance of payments, job creation, regional economic growth, royalty and tax revenues, and indirect social benefits. Through various incentives, they attempt to reduce the financial risks facing the companies. Of course, governments are keenly aware of the multiplier effect of project spending and are eager to capture as much of that spending as possible within their borders. In return for project financial assistance, companies are often willing to make specific commitments to levels of local or national content.

Hibernia development scheduled to proceed

The Hibernia field was discovered in late 1979, and nine subsequent wells have delineated the field. The project owners submitted a development plan to governments during 1985, to which approval was given in 1986.

Recovering oil from Hibernia will require a massive platform, known as a gravity base structure (GBS), that rests on the seabed. To protect it from pack ice and icebergs, the GBS has been developed with a 100-metre wide, 85-metre tall outer caisson wall. The GBS will provide stability for a huge operations base from which wells can be drilled and produced, much as if

they were on land. In addition, it offers storage for about 1.5 million barrels of oil, roughly 10 days of production. Most of the 83 wells will be drilled directionally from the platform, with some 35 outlying wells being drilled from semi-submersible rigs. The produced oil will be processed on the GBS and pumped to two loading platforms where shuttle tankers can safely tie up and receive cargo bound for onshore refineries.

The scale of the proposed Hibernia production platform would dwarf the Calgary Tower.

The Hibernia Statement of Principles

The Statement of Principles for the Hibernia project is a textbook example of the balance that must be struck between private and public interests before the launching of an energy megaproject. The essence of this fiscal agreement is that, in return for reducing the consortium's financial risk, the federal and Newfoundland governments will be entitled to an escalating share of the returns once the project pays for itself.

The federal government will provide up to \$1.04 billion in grants to cover 25% of eligible capital costs. Ottawa will also guarantee up to \$1.66 billion in financing (to be provided by the private sector) which can be drawn down at the rate of 40% of capital costs. The federal and Newfoundland governments will contribute additional amounts, totalling \$106 million, from funds already earmarked for offshore development. If oil prices remain low after project start-up, the federal government will help out with interest assistance and additional guarantees for temporary financing. The province has agreed to exempt capital spending from its retail sales tax and reduce sales tax payable on operating costs.

The federal government has the option to acquire a 10% net profit interest in the project after repayment of the guaranteed financing and interest assistance. The agreement specifies that royalties payable to Newfoundland will be graduated; they will start low and be indexed to crude oil prices and rise once the consortium has earned a predetermined return. If the project turns out to be very profitable, royalties could be as high as 42.5% of net revenues. Also, the project sponsors will attempt to source in Canada, on a competitive basis, between 45 and 50% of project development expenditures to production start-up. They will endeavour to contract a significant portion of the outfitted concrete base in Newfoundland.

The Hibernia deal should allow a project to proceed that will increase Canada's production capability, develop new technologies and meet the consortium's expectations of an adequate rate of return. Governments stand to gain significant revenues over the life of the project while the nation gains important economic benefits and greater energy security.

Moving forward at Terra Nova

Terra Nova, among the largest East Coast oil fields discovered to date, is proceeding toward development. Petro-Canada, the operator and largest interest holder, completed drilling the Terra Nova K-08 discovery in 1984. It followed up with seven additional wells to delineate the field and assess its reservoir characteristics. Fiscal negotiations on the proposed development have yet to commence.

Unlike Hibernia, Terra Nova's smaller reserves are insufficient to support the cost of a GBS, and a floating production system is planned that can disconnect and move if threatened by ice. Preliminary engineering is under way to select

the most appropriate surface vessel for the production system. Wells will be drilled from conventional offshore rigs. Oil from the subsea wells will move through flow lines to the surface vessel where, after processing and storage, it will be off-loaded to tankers for delivery to shore. The floating concept being developed for Terra Nova may have wide application for other Grand Banks fields.

Further prospects for the East Coast

Both Hibernia and Terra Nova could be catalysts for further offshore energy developments. They will attract specialized skills from around the world and promote the transfer of technology to Canada. Infrastructure for the construction, maintenance and supply of offshore megaprojects will be developed and will help to reduce costs for the next generation of projects. This could bring smaller reserves within economic reach, and create a more consistent level of activity. There will be cash flow to spur further exploration, and added geological and production knowledge will lead to new exploration targets.

Along with the tangible benefits will be the intangible lift to industry confidence. Industry will welcome a demonstration that economic projects can be mounted in a hostile physical environment and under less than optimal business conditions.

It is possible that Canada's East Coast will experience the cyclical development that has been typical of other offshore operations. In the late 1960s, for example, oil prospects in the North Sea looked gloomy and there was a lull in activity until the discovery of the enormous Ekofisk and Forties fields. An exploration revival quickly proved vast reserves and the first wave of production followed. These successes inspired another round of exploration in the 1970s and the new expertise and infrastructure made smaller discoveries economically accessible.

There is every reason to believe that Hibernia and Terra Nova will provide the confidence and the industrial and technical foundation on which to build a mature East Coast oil community. Prolonged negotiations and then weakening prices delayed the exploitation of Grand Banks discoveries. Now, however, agreement on the nature of fiscal terms will permit the first key project to proceed, and development plans for the second are in an advanced stage of preparation. With them will come an important new dimension to the East Coast economy and a more secure energy future for Canada.



Petro-Canada is the leading player

Thirteen years ago, when Petro-Canada was establishing itself in Calgary, exploration off Canada's East Coast was declining. Even though energy prices were rising rapidly, companies were relinquishing millions of acres as leases expired. Heavy investments had been made on exploration without a major discovery.

During the intervening years, a dramatic change has occurred. The Geological Survey of Canada estimates ultimate technically recoverable reserves off the East Coast to be about 12 billion barrels of oil and 86 trillion cubic feet of natural gas. Petro-Canada estimates the potential discovered oil reserves to be well over 2 billion barrels.

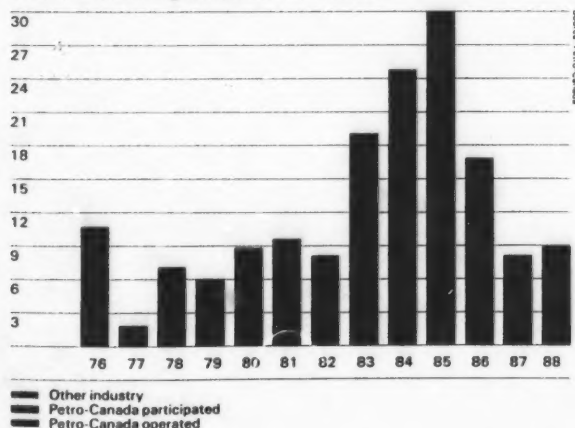
Petro-Canada has been a leader in turning the tide in favour of the East Coast offshore. The Corporation is a 25% partner in the Hibernia project. It discovered and operates the nearby Terra Nova field where it holds a 44% interest in the pre-development engineering phase. Petro-Canada has also participated in other Grand Banks discoveries such as Ben Nevis, West Ben Nevis and Hebron. On the Scotian Shelf, the Corporation has been a partner in Venture,

Thebaud, Glenelg and other gas discoveries as well as the relatively small oil finds at Cohasset and Panuke. The Corporation's total probable and potential reserves in the various discoveries amount to 650 million barrels of oil and natural gas liquids and 2.5 trillion cubic feet of natural gas.

Since Petro-Canada began operations it has participated in 128 wells off the East Coast, or 80% of the industry total, and was the operator of 33 wells. Including government incentives, the Corporation has invested \$2.2 billion on East Coast drilling and seismic expenditures, 36% of the industry total. Along the way, Petro-Canada has acquired the technology and expertise to emerge as a leading operator in the region, capable of attracting partnership deals with small Canadian companies as well as the largest multinationals.

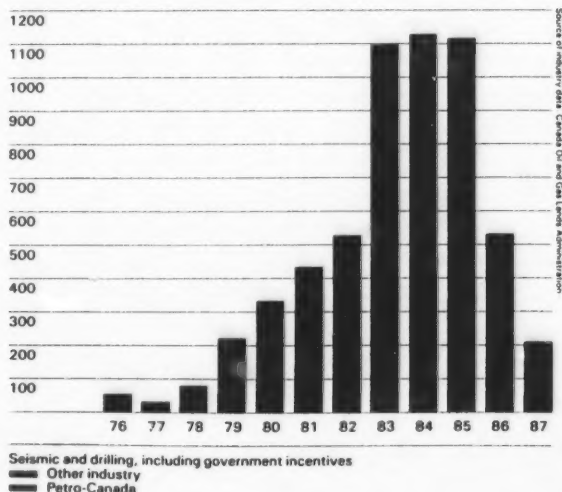
Wells drilled

Since it was established, Petro-Canada has been involved in most of the drilling off Canada's East Coast



Expenditures (millions of dollars)

Petro-Canada's investments have spurred East Coast activity



From an operational standpoint, 1988 was a successful year for the Resources Division. This performance was not, however, reflected in the financial results. The combined effect of low world oil prices, the rising Canadian dollar and weak natural gas prices reduced the margins from oil and gas production. Cash flow was \$362 million and earnings were \$48 million, both significantly down from 1987. Cash flow return on average capital employed was 8.9 per cent, a drop from 13.9 per cent in the previous year.

**Financial and
Operating Profile**

Financial	1988	1987
Revenue (millions of dollars)	989	1 138
Earnings (millions of dollars)	48	162
Cash generated from operations (millions of dollars)	362	563
Capital expenditures (millions of dollars)	611	336
Average capital employed (millions of dollars)	4 358	4 155
Cash flow return on average capital employed (per cent)	8.9	13.9
Operating	1988	1987
Crude oil and field natural gas liquids production, net before royalties (thousands of m ³ per day)		
Conventional crude oil	10.0	10.1
Synthetic crude oil	4.1	3.7
Bitumen	0.5	0.5
Field natural gas liquids	2.1	2.1
Total	<u>16.7</u>	<u>16.4</u>
Natural gas production, net before royalties (millions of m ³ per day)	13.7	12.3
Natural gas liquids production from straddle plants including ethane (thousands of m ³ per day)	6.4	6.3
Proven reserves of crude oil and natural gas liquids, net before royalties (millions of m ³)	92.5	89.0
Reserves life index for crude oil and natural gas liquids (years)	15	15
Proven reserves of natural gas, net before royalties (billions of m ³)	97.9	96.9
Reserves life index for natural gas (years)	19	22



George Sinclair, Fred Bagley, Ed Anderson and Roger Lien are managers of district operations, reservoir engineering, exploration and production engineering. Petro-Canada employs cross-functional teams to provide better identification of opportunities, more efficient operations and a quicker pace of activity.

The Brazeau sour gas plant in west-central Alberta is being expanded to almost triple its present capacity.



With external factors having such an influence on the business, the Division focused its efforts on controllable factors that contribute to financial and operating performance. During 1988, production volumes were increased 12 per cent for natural gas, 2 per cent for field natural gas liquids and 10 per cent for synthetic crude oil. The expected decline of conventional crude oil production was held at less than 1 per cent of 1987 production.

Equally important during 1988 was stewardship of the Division's asset base. To support a strategic focus on Western Canada, land acquisitions and exploration drilling both increased. Drilling success ratios rose over 1987, and it is expected that reserves additions from exploration and development, when fully appreciated, will replace the Corporation's oil and natural gas production for the year. In addition, 4.0 billion cubic metres of proven gas reserves were purchased in 1988.

Resources Division strategies, consistent with those described in the 1987 Annual Report, continue to strengthen the asset base and optimize upstream cash contributions to the Corporation. These strategies are: building strength in natural gas, optimizing Western Canada conventional operations, developing new sources of crude oil and managing changes in the reserves base.

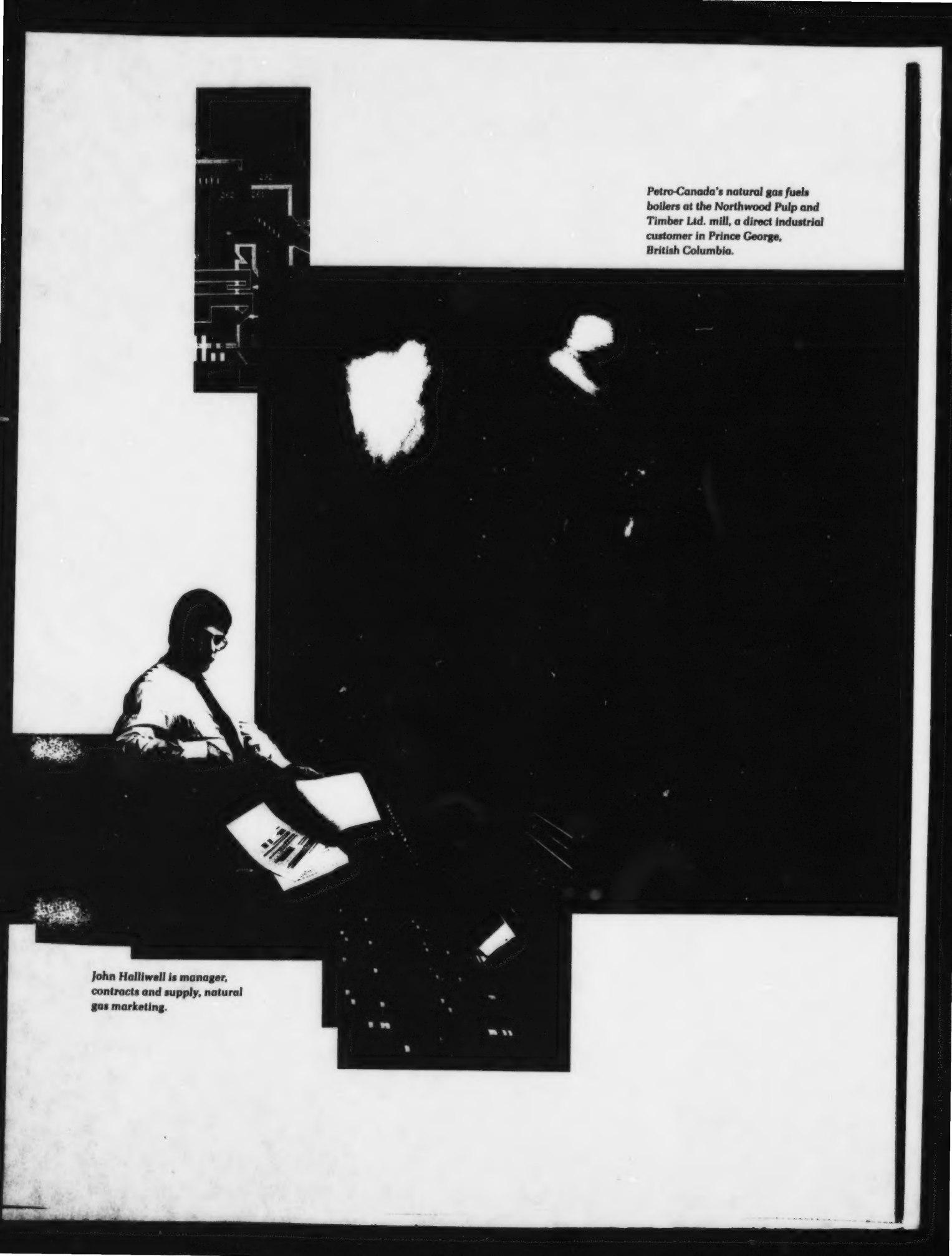
Building strength in natural gas

During 1988, there was a welcome increase in markets for Canadian natural gas. Furthermore, by year end the erosion of domestic and export natural gas prices had been turned around.

Improving markets, the restructuring of the industry following deregulation, and the strengthening of Petro-Canada's marketing and supply capabilities combined to boost the Corporation's gas sales to a record 15.5 million cubic metres per day. Over the last five years, Petro-Canada's share of total industry sales has increased from 5.3 per cent to 6.2 per cent.

Petro-Canada pursues direct sales to end-users, such as local distribution companies and industrial customers, in addition to traditional sales to marketing companies. Direct sales accounted for 13 per cent of the Corporation's 1988 gas sales, up from 4 per cent in 1987. Internal markets – Petro-Canada's refineries, enhanced recovery schemes and straddle plants – took another 17 per cent and the remaining 70 per cent went to marketing companies. Besides Petro-Canada's own production, sales included volumes produced by third parties.

Optimizing natural gas sales levels requires a careful balancing of production capability, third-party supply, processing and pipeline availability, and seasonal market requirements. During the year, Petro-



Petro-Canada's natural gas fuels
boilers at the Northwood Pulp and
Timber Ltd. mill, a direct industrial
customer in Prince George,
British Columbia.

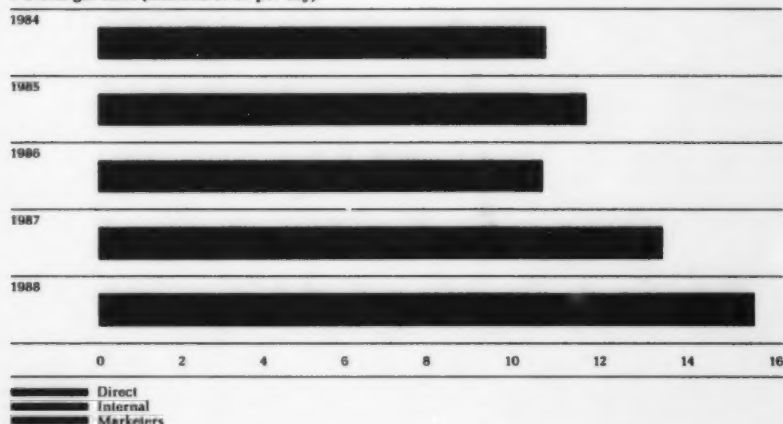
John Halliwell is manager,
contracts and supply, natural
gas marketing.

Canada utilized storage at Carbon, Alberta, to maintain production levels during low-demand summer months and to handle deliveries during the winter period of peak demand and high prices. Additional measures to maximize asset productivity included: selecting appropriate markets for new, uncontracted gas supplies; utilizing Petro-Canada contracted pipeline space to capacity; and selling gas that is under contract to, but not taken by, marketing companies.

Petro-Canada increased its gas supplies in 1988 by taking advantage of some attractive opportunities to acquire proven reserves. Previously uncontracted gas volumes associated with the purchases, mostly in the Hanlan area of Alberta and around Hatton, Saskatchewan, were quickly brought on stream to meet specific direct and internal sales requirements. At Crane Lake, Saskatchewan, Petro-Canada drilled production wells, laid a gathering system, built a processing plant and began sending gas to market within four months of purchasing undeveloped gas reserves.

Natural gas sales have increased, with a growing share taken by direct and internal markets

Natural gas sales (millions of m³ per day)



Optimizing Western Canada conventional operations

Conventional operations remain at the centre of the Division's capital spending program. Sixty-four per cent of capital expenditures, or \$393 million, was utilized to develop the existing asset base, and find or acquire additional conventional oil and natural gas in Western Canada.

Petro-Canada held production rates at high levels and added reserves through improved recovery processes and infill drilling. At the Bellshill Lake and Valhalla oilfields in Alberta, these measures maintained production and increased reserves. New waterflood programs in Saskatchewan increased proven reserves by 234 per cent at Salt Lake and Cactus Lake.

Petro-Canada's largest capital project initiated in 1988 was the expansion of the Brazeau sour gas plant in west-central Alberta. The plant is operated by Petro-Canada and upon completion of the project will be about 36 per cent owned by the Corporation. The total cost of the plant expansion project will be \$66 million, or \$21 million net to Petro-Canada. Construction began in October and is expected to be completed in late 1989. The decision to expand the plant to almost three times its present capacity was based on an analysis of production data that allowed accurate measurement of reserves in the very complex reservoir. The Corporation's share of additional production capacity will be 300 cubic metres of natural gas liquids, 160 cubic metres of ethane and 100 tonnes of sulphur per day.

The exploration focus this year was on gas, and the results were good. Among the promising exploration lands acquired were rights on the Wainwright military reserve in east-central Alberta. By year end Petro-Canada had completed nine gas wells. After further drilling and pipeline construction, production is planned for late 1989. Among other significant discoveries were the sour gas and liquids find at Sarcee, west of Calgary, and other gas wells in the Newby area of northeastern Alberta and at Doe Creek in northeastern British Columbia. The Corporation found oil reserves in the Shekilie area of north-western Alberta and the Hitchcock area of Saskatchewan. Overall, the exploration programs resulted in 35 gas wells and 20 oil wells, for a success ratio of 63 per cent.

Developing new sources of crude oil

Petro-Canada sees Canada's East Coast offshore as the country's next major oil supply region. As the leading industry player, the Corporation has developed an excellent position in the two most promising oil projects, Hibernia and Terra Nova.

Petro-Canada holds a 25 per cent interest in the Hibernia field, which is estimated to contain approximately 83 million cubic metres of recoverable reserves. In July, the Hibernia consortium of companies and the federal and provincial governments agreed to a Statement of Principles concerning fiscal terms for development of the field. Total capital spending over the 26-year life of the project is expected to be \$8.5 billion, including about \$5.2 billion in pre-production costs. Hibernia will reach an average production level of about 17 500 cubic metres of oil per day.

The Terra Nova offshore oilfield, located close to Hibernia, is another excellent development prospect. Petro-Canada discovered the field in 1984 and has since drilled seven delineation wells. Tests completed in July on the three most recent wells were very encouraging, suggesting probable reserves could exceed 21 million cubic metres. The results have led Petro-Canada – as operator and 44 per cent participant in the pre-development phase – to award a preliminary engineering contract to evaluate development options.

In the oil sands, Petro-Canada is a 15 per cent participant in the OSLO project. OSLO is a proposed 12 000 cubic metre per day integrated mining plant in northeastern Alberta, with estimated total pre-production costs of \$4.1 billion. An agreement-in-principle was reached in September between the OSLO consortium and the federal and Alberta governments on fiscal terms relating to the venture. A two-year engineering program will begin in 1989 and, assuming the owners find the project economically viable, construction will follow.

Synthetic crude production at the Syncrude plant, in which Petro-Canada holds a 17 per cent interest, reached a record level for the fourth consecutive year. The Corporation's share of production was about 4 050 cubic metres per day. This record was achieved in part due to the commissioning of additional processing facilities during 1988. Unit operating costs were held steady but low prices for synthetic crude oil drastically cut margins.

At the Wolf Lake in situ oil sands facility, 50 per cent owned by Petro-Canada, construction of the project's second phase continued, slightly ahead of schedule and under budget. However, results in 1988 suffered from very low bitumen prices and production problems at the existing plant.

Petro-Canada continued its program of international exploration. Modest in scale, the program accounted for 4 per cent of the Division's capital expenditures in 1988. International exploration offers an excellent oppor-

The successful test of the Terra Nova C-09 delineation well has boosted reserves estimates for the Terra Nova oilfield.



Ken McDonald managed off-shore drilling from St. John's, Newfoundland.

Managing changes in the reserves base

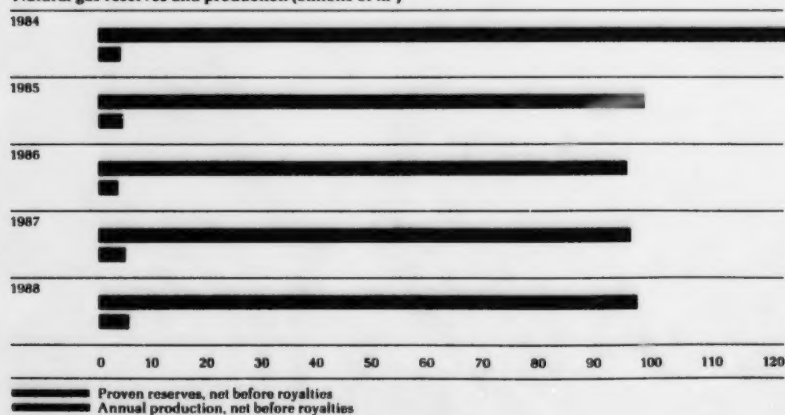
tunity to add to Petro-Canada's oil reserves at low to moderate cost. New petroleum concessions were negotiated in Pakistan, Malaysia and Colombia and arrangements were concluded to farm in on exploration ventures in Thailand, Colombia, Spain and China. The Corporation participated in drilling four wells during the year; one of these, in Colombia, was an onshore oil discovery.

The Division's major asset base continues to be the conventional crude oil and natural gas reserves in Canada's Western Sedimentary Basin and this will likely be the case into the twenty-first century. However, Petro-Canada is increasingly reliant upon non-conventional resources in the Alberta oil sands, and recognizes the potential of conventional crude from the East Coast offshore and reserves that may be obtained through international exploration. Because of Western Canada's maturity as an exploration area, it is becoming more expensive to find economic quantities of the better-quality light and medium crude oils.

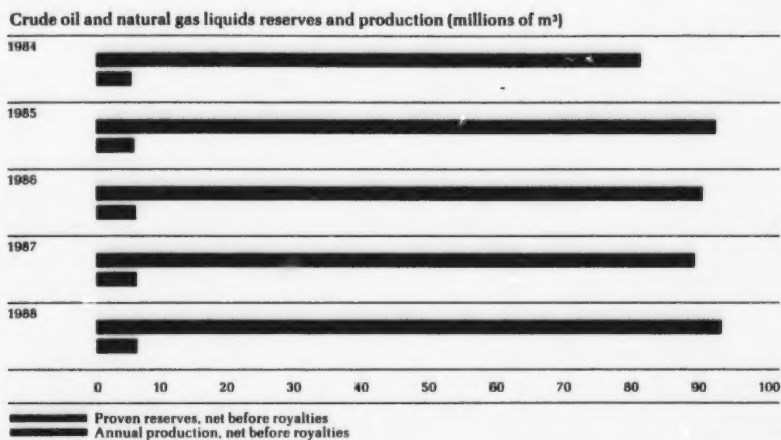
Petro-Canada's proven reserves are summarized in numerical form in the Reserves Information table and Five Year Operating Summary. Year-over-year decreases in conventional crude oil tend to reflect downward revisions of proven undeveloped reserves. This is counterbalanced by upward revisions in the proven reserves of synthetic crude oil. With changing conditions in natural gas markets, certain smaller, more isolated or geologically marginal fields were no longer found to be economically viable and they were removed from the proven reserves category. Fields

After a downward revision in 1985, reserves have remained steady; production has increased

Natural gas reserves and production (billions of m³)



Crude oil and natural gas liquids reserves and production have risen, holding the reserves life index at a steady level



which currently are not technically and economically viable are treated as potential reserves and are not included in this report. For the time being, it has been decided to leave reserves associated with major frontier and oil sands development projects in the potential category until development is assured.

The proportion of the Corporation's reserves which are proven developed as opposed to proven undeveloped increased slightly between 1987 and 1988, reflecting the development work that has been done to bring oil and gas fields to production. The reserves life index for crude oil and natural gas liquids remained steady at 15 years. In spite of an increase in reserves, the reserves life index for natural gas dropped to 19 years due to an increase in production. Over 1988, additions of proven reserves were equal to 160 per cent of the year's production for crude oil and 116 per cent for natural gas. Replacing proven reserves in excess of production is a major accomplishment in the Western Canada basin where mature fields show rapid decline curves. This increase is the result of continuing efforts in exploration and development, revisions and purchases of proven reserves.

Altogether, Petro-Canada holds proven oil, gas and natural gas liquids reserves in approximately 400 fields in Western Canada. The six largest fields, Valhalla, Pembina, Bellshill Lake, Brazeau River, Nipisi and Cactus Lake, account for 47 per cent of conventional oil and natural gas liquids reserves. The top six natural gas fields, Hanlan, Yoyo, Whitecourt, Medicine Hat, Laprise Creek and Ricinus, comprise 35 per cent of the Corporation's natural gas reserves.

PRODUCTS DIVISION

Results for the Products Division rose slightly from the previous year. Earnings were \$102 million, a 7 per cent increase over 1987. Cash generated from operations was \$311 million, down 6 per cent. The Division's return on average capital employed was 3.8 per cent, an improvement over 3.4 per cent in 1987. Although this recovery was small, industry-wide trends indicate some cause for optimism.

There has been some easing of the over-capacity problems which have reduced refining and marketing profitability in recent years. Demand for refined products was higher for the third consecutive year in both Canada and the United States. In addition, North American refining capacity declined due to operating changes associated with the phase-out of lead in gasoline. These two factors caused refinery utilization rates generally to rise, particularly for secondary or conversion units.

For Petro-Canada, these structural changes produced margin improvements on the wholesale side of the business. However, in retail operations, profitability was still limited in 1988 by several factors. Retail gasoline markets were still intensely competitive and volatile, particularly in Western Canada which experienced recurring price wars in 1988. With the higher promotional expenses needed to maintain volumes, competition squeezed retail margins severely.

Financial and Operating Profile

Financial	1988	1987
Revenue (millions of dollars)	4 245	4 461
Earnings (millions of dollars)	102	95
Cash generated from operations (millions of dollars)	311	330
Capital expenditures (millions of dollars)	159	122
Average capital employed (millions of dollars)	2 700	2 757
Return on average capital employed (per cent)	3.8	3.4
Operating	1988	1987
Petroleum product sales (thousands of m ³ per day)	43.8	45.6
Retail outlets at year end	3 429	3 677
Refinery crude capacity at year end (thousands of m ³ per day)	60.6	64.0
Crude oil processed by Petro-Canada (thousands of m ³ per day)	48.5	48.4
Average refinery utilization (per cent)	77	76

The introduction of the unleaded "Maximum" gasolines provides customers with three grades of superior, cleaner-burning fuel.



Sales representative Keith Eliuk, district manager Carole Emard and retail station manager Glen Robinson were members of a customer focus task force. This group has developed programs that will reorient the Division toward customers' needs.

Focusing on the customer

Total refined product sales volumes were down 4 per cent compared to 1987, reflecting difficult price competition and the shedding of low-margin sales.

Products Division strategies, geared to increasing the profitability of the refining and marketing business, evolved and matured from those discussed in the 1987 Annual Report. They are: focusing on the customer, increasing revenue from existing assets, building a stronger lubricants business and refining more efficiently.

Petro-Canada recognizes that the core of its downstream business is selling fuels and that earnings growth hinges on satisfying customers.

The Corporation continues to adapt its product offering to strengthen market share and expand further in high-margin market segments. This strategy recognizes the changing requirements of Canadian consumers and the strengths of Petro-Canada's research and manufacturing base.

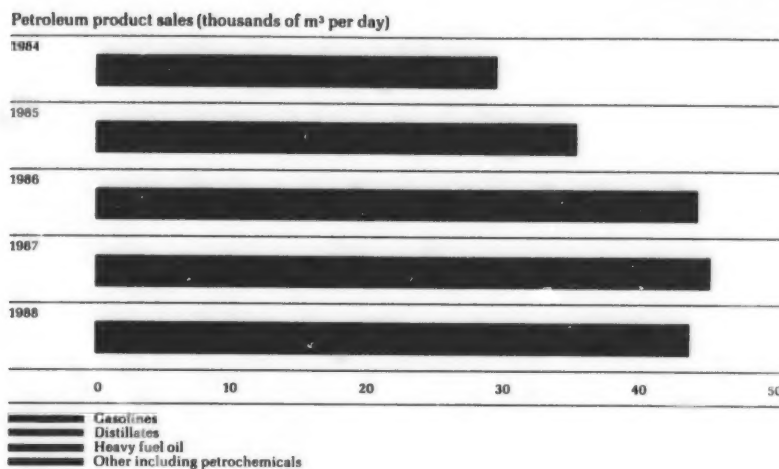
In September, Petro-Canada launched its "Maximum" family of unleaded gasolines, three grades of gasoline specially formulated to deliver improved fuel economy, power and longer engine life. These unleaded gasolines are a response to growing public awareness about air quality and the effects of lead in the environment, and the federal government's legislated deadline for removing lead from gasoline. By moving quickly in response to emerging trends, Petro-Canada has achieved an unrivalled position in the growing unleaded market.

"Maximum", "Maximum Plus" and "Maximum Supreme" allow Canadians to choose from three octane levels to match specific vehicle needs and driving conditions. Over 1 500 retail outlets offered "Maximum" gasoline by year end, and the remainder of the network will be converted in 1989.

For several years, programs and incentives have been implemented to improve service. Petro-Canada's toll-free customer service line, introduced in 1987, became operational nationwide during 1988. Any customer can contact the Corporation for information on retail products, services or credit. At year end, a specially trained staff of 20 was fielding over 25 000 inquiries per month, a mix of commendations, suggestions, queries and complaints.

During the year, installation of computerized credit authorization terminals was completed at over 2 500 high-volume retail outlets across the

Total petroleum product sales declined 4 per cent in 1988



country. Retailers and customers have been enthusiastic in their evaluation of the terminals which can process credit card purchases faster, more accurately, and with greater security than before. For Petro-Canada, this program has reduced paperwork and led to speedier processing of accounts receivable.

After reviewing the wholesale marketing business from the perspective of customers, Petro-Canada introduced a computer system and software designed to allow bulk sales operators to become their own business managers. Wholesale associates can enhance their customer service by responding to specific local needs, such as in delivery arrangements, credit or associated services, and still offer a national line of quality products. The result for customers is closer relationships with more responsive businesses, while for the Corporation, working capital, overhead and operating costs are all reduced.

The wholesale invoicing system was improved in 1988. This lowered the error rate on industrial and commercial accounts by 50 per cent, leading to better service and faster turnaround on accounts receivable.

Petro-Canada held its position as the country's leading asphalt supplier, with approximately 35 per cent of the market. During the year, customer service was improved through the upgrading of asphalt terminals in Ontario.

Petro-Canada has developed innovative pricing mechanisms for medium and large industrial customers through the use of petroleum futures and options. The customer gains from budget certainty, lower administrative costs associated with firm prices, and the ability to lock in suitable prices. Petro-Canada benefits from committed sales at known margins.

These and other efforts to strengthen the relationship with consumers have produced some successes. However, a careful review of overall customer satisfaction concluded that results have been inconsistent across the Division. A clear opportunity has been identified to build market share by providing a level of customer satisfaction that would differentiate Petro-Canada from its competitors. Accordingly, a high-level task force has developed programs that will reorient the entire organization and its operations toward customers' needs. By year end, specific initiatives were planned to improve marketing leadership, build more direct links between all business groups and the retail front line, and place a renewed and deliberate focus on the fundamentals of the retail business.

Increasing revenue from existing assets

Petro-Canada offers retail customers several additional services that increase the revenue generated from existing sites and in turn promote greater gasoline sales. In 1988, the Division continued its implementation of three programs: car washes, convenience stores and the Certigard vehicle maintenance and repair franchises.

Particular emphasis was given to the expansion and further development of Certigard. By year end, 79 Certigard businesses were operating in major urban centres across Canada. Over 100 more are planned for 1989. In each case, franchisees offer motorists long-term, customized preventive maintenance. Key components of the program are a distinctive bay management system and personalized service, giving customers confidence in the quality of work performed and an understanding of future maintenance requirements and their costs.

Along with the growth in the number of Certigard businesses was the introduction in 1988 of supporting computer hardware and software.

Besides its record-keeping, report-producing and diagnostic capabilities, the computer system reduces franchisees' costs with automated bookkeeping, payroll and accounting, and provides an electronic link with head office for information on vehicle parts, prices and maintenance.

Market research has indicated that consumers are looking for greater assurance that their vehicles will be maintained with long-term security and economy in mind. Training of franchisees and staff during the year emphasized how the Certigard program can best be used to satisfy these preferences. Additionally, advertising and promotion programs were carried out to make motorists aware of the benefits of this service.

Building a stronger lubricants business

Petro-Canada has an excellent position in the lubricants business. The patented HydroTreating process at the Clarkson, Ontario, lubricants plant produces base stocks with a purity that is unique in Canada. Petro-Canada is increasing the financial contribution from lubricants by focusing more of its activity at the Sheridan Park Research and Development Centre toward lubricants product development and by more aggressive domestic and foreign marketing.

Over the last two years, earnings from lubricants were reduced as a result of a fire at the Clarkson plant in 1987. In the summer of 1988, a new first-stage HydroTreater became operational and Clarkson resumed full production of its 300 HydroTreated (HT) products and 1 350 product/package combinations.

Petro-Canada maintains its position as a leader in high-performance automotive and industrial lubricants. Product development teams continue to investigate market opportunities and formulate, test and launch new products that will enhance profits. A new product marketed in 1988, "Super Premium 5W30" motor oil, has received industry recognition for its superior low temperature properties, oxidation resistance and wear characteristics.

During the year, Petro-Canada gained entry into additional lubricants markets. Agreements were reached to provide factory fills of automatic transmission fluids and other HT-based lubricants for the Canadian plants of a number of Pacific Rim car manufacturers. Farther afield, a distributor began selling Petro-Canada branded gear oils, motor oils and transmission fluids in Japan's high-performance automotive market.

A new first-stage HydroTreater is now operational at the Clarkson lubricants plant. The plant produces lubricants of a quality unrivalled in Canada.



Bob Hodgson, general manager of lubricants, is responsible for improving the profitability of Petro-Canada's lubricants business.

**Refining more
efficiently**

The Division's efforts to improve refinery utilization, reduce operating costs and meet lead phase-out targets, have involved refinery integration, computerization and equipment upgrading.

A major efficiency program – the integration of the Corporation's refineries at Edmonton, Alberta, and Port Moody, British Columbia – was completed in the last quarter of the year. Edmonton's processing facilities are highly efficient and produce an exceptionally high proportion of gasolines and diesels, with correspondingly low volumes of by-products such as heavy fuel oil. Taking advantage of this strength, a specially tailored feedstock stream is produced for pipeline transportation to Port Moody. At Port Moody, the refinery's excellent octane generation capability was retained. The crude unit was converted to handle the Edmonton feedstock, while other units deemed unnecessary were decommissioned. Synergies are made possible by the different capabilities of the two plants and distinct market requirements that result from weather and altitude variances.

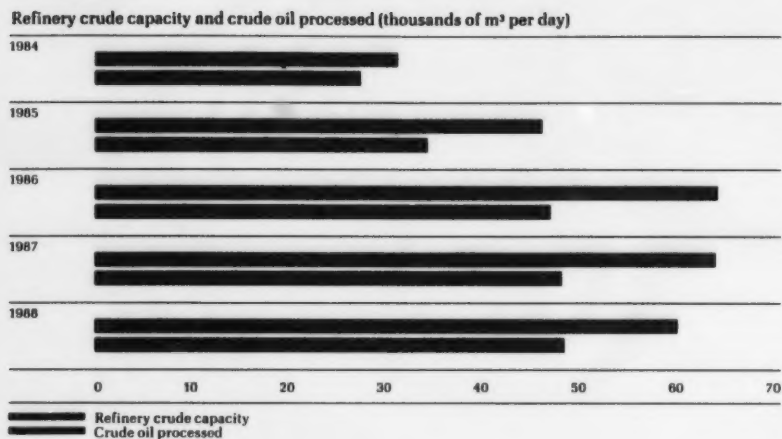
An integration program with similar objectives is under way at Petro-Canada's Clarkson and Trafalgar refineries in Ontario where the facilities were recently placed under a single management. The interchange of feedstock and blending components between the two plants improves efficiency.

These integration measures helped increase average capacity utilization for the Corporation's refining network to 77 per cent from 76 per cent in 1987. In the last two months of the year, following completion of the Edmonton/Port Moody integration, network utilization rose to 80 per cent.

To satisfy increased demand for unleaded gasolines and meet lead phase-out targets, modifications are under way at several refineries. For instance, isomerization units are being installed at Edmonton and Clarkson at a total cost of approximately \$120 million.

Capital spending on refinery computerization continued through 1988. Results will lower operating costs and improve yields of top-quality gaso-

In 1988, refinery capacity was reduced and crude oil processed held steady, thereby increasing refinery utilization



lines and distillates. Main plant computerization was completed at Edmonton, and at year end Petro-Canada decided to improve process control at the Trafalgar refinery through a major re-instrumentation program. At the Montreal refinery, the gasoline blending system is being upgraded and computerized to provide more stringent and cost-effective controls over product quality. The \$20-million program will be completed in 1989.

CORPORATE RESPONSIBILITY

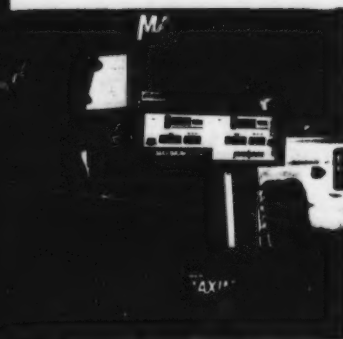
From community to national programs, Petro-Canada continued its efforts to enrich the lives of Canadians.

The year will be memorable for the thousands of Canadians who participated in the XV Olympic Winter Games through the Olympic Torch Relay. Building from that success, Petro-Canada launched the Olympic Torch Scholarship Fund. Through it, young Canadians are encouraged to balance their pursuit of athletic excellence with the achievement of educational goals.

Promotional programs associated with the relay raised \$4 million and provided the capital for the Scholarship Fund. Interest earned from the fund goes to scholarships granted each year to post-secondary students involved in Pan American or Olympic sports. Several awards are also made annually to individuals working toward a career in coaching. The first 100 recipients were announced by the Canadian Olympic Association in September.

For several years, Petro-Canada has emphasized sports and safety for children. For instance, 1 500 dealers and agents sponsored baseball teams in 1988, and the Right Riders program helped raise bicycle and road safety awareness among Canadian children of elementary school age.

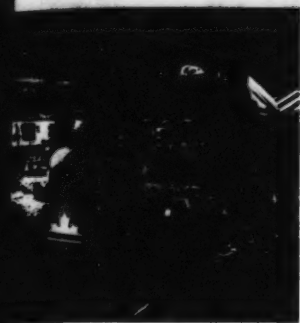
Right Riders is the only national safety program of its kind. During the year 200 000 children participated in Petro-Canada's safety instruction sessions held at 39 exhibitions and fairs across Canada. A teaching kit on bicycle safety was added to the range of Right Riders activities in 1988. Officers from over 200 police forces assisted in presenting the materials to 13 600 schools and an estimated audience of more than four million children. The Right Riders program receives assistance, cooperation and



Responding to legislation and public concern about the environment, Petro-Canada introduced "Maximum" lead-free gasolines.



From high art to comedy, Petro-Canada sponsors cultural events across the country.



Teaching road safety to children remains a priority.

endorsement from police forces, provincial safety associations, ministries of education and the Traffic Injury Research Foundation.

Petro-Canada has also taken steps to ensure the broadest range of Canadians has an opportunity to work for the Corporation, and that its employees are treated with fairness and respect. During 1988, Petro-Canada continued to implement its comprehensive employment equity policy. The policy is designed to ensure the fair treatment of current and prospective employees in four designated groups: women, disabled persons, visible minorities and aboriginal peoples. Related initiatives include establishing a child care facility for Calgary-based employees, a company-wide policy prohibiting sexual harassment, a native education awards program, and a youth employment program targeting unemployed young people. The Corporation also runs a special, university-level recruitment program among aboriginal and disabled persons studying in industry-related disciplines.

In 1988 Petro-Canada re-focused its commitment to the environment. A new environmental protection policy drew employees' attention to the importance of environmental issues in all of the Corporation's operations.

Public concern over air quality and health was a key consideration in introducing Petro-Canada's "Maximum" line of unleaded gasolines. Other new initiatives in the Products Division were the development within each refinery of a community awareness and emergency response program, and the inclusion of environmental and safety material in operations manuals delivered to all wholesalers. During the year, \$9.7 million was spent on an extensive program to upgrade underground storage tanks at wholesale and retail sites throughout the country.

In the Resources Division, environmental considerations were prominent in the planning of all new exploration and production activity. For instance, development of Petro-Canada's newly acquired gasfield at Crane Lake, in south-western Saskatchewan, was contingent upon protecting the delicate ecology of the Sand Hills area. Saskatchewan Government officials approved the plans as environmentally responsible and indicated satisfaction with the way in which they had been followed by Petro-Canada employees and contractors.

As 1988 ended, years of preparation were completed for "The Struggle for Democracy" television series. In 1983, Petro-Canada approached the respected journalist, Patrick Watson, to assist in developing a first-rate series on a topic of significant public interest. Petro-Canada provided advance funds to sponsor the project. The completed work was presented on national television in early 1989.

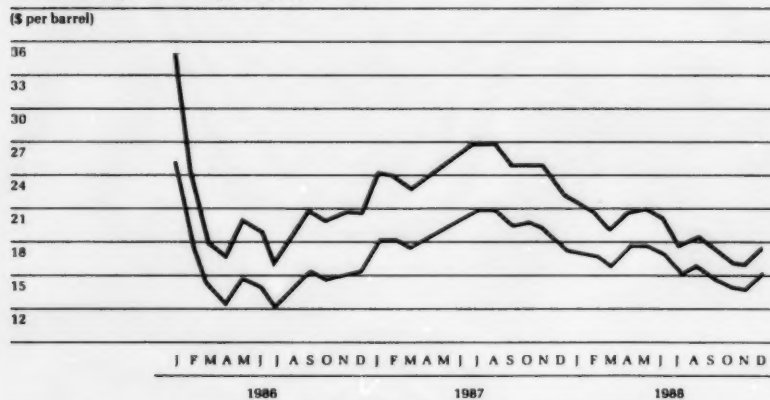
Business conditions difficult and volatile

Petro-Canada's financial results declined in 1988 largely due to lower crude oil prices. Volatility and uncertainty continue to characterize world oil markets. In 1988, the combination of dropping world prices and a strengthened Canadian dollar caused Canadian oil prices to reach a low of \$15 (U.S. \$13) before recovering at the end of the year. Over the last three years, crude oil prices averaged Cdn. \$21 in 1986, \$25 in 1987 and \$19 in 1988. Natural gas prices continued at depressed levels. Although there was some recovery by year end, Alberta field-gate natural gas prices averaged approximately Cdn. \$1.63 per thousand cubic feet in 1988 versus Cdn. \$1.71 in 1987. The combination of these factors, slightly offset by increased natural gas sales, caused oil and gas production revenues to fall during 1988.

Crude oil prices*

The decline in world oil prices and a stronger Canadian dollar combined to depress Canadian oil prices to very low levels in 1988.

■ Canadian \$ prices
■ U.S. \$ prices

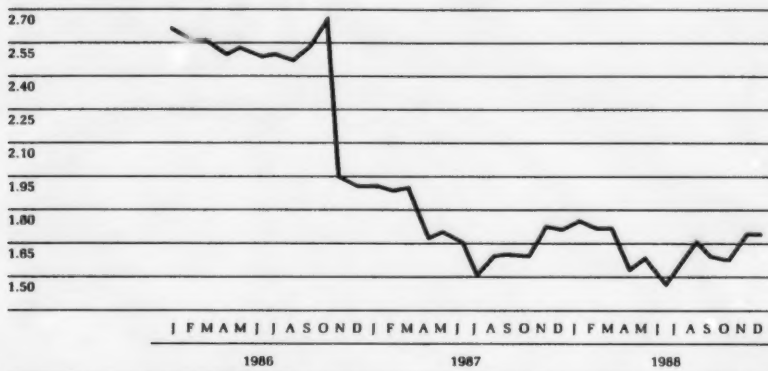


*U.S. \$ prices based on average NYMEX prices (one month forward) for West Texas Intermediate at Cushing.
Canadian \$ prices are based on average NYMEX prices (one month forward) for West Texas Intermediate at Edmonton.

Natural gas prices*

Natural gas prices began a modest recovery after hitting a nine-year low in 1988.

(Cdn. \$ per thousand cubic feet)



*based on industry average of Alberta field-gate prices

Financial results down

Net earnings after redeemable preferred share dividends were \$94 million in 1988, down 45 per cent from \$172 million in 1987. This drop reflects the impact of lower crude oil and natural gas liquids prices and a \$22 million extraordinary write-down of the investment in Sedpex Inc. Resources Division earnings decreased from \$162 million in 1987 to \$48 million in 1988. Products Division earnings increased marginally from \$95 million to \$102 million. Corporate and other activities resulted in a loss of \$24 million comparing favourably to a loss of \$44 million in 1987. This improvement was largely related to the realization of deferred profit in inventory due to lower crude oil prices and foreign exchange gains resulting from the strengthening of the Canadian dollar.

Cash generated from operations of \$613 million in 1988 was down 21 per cent from \$778 million a year earlier. Cash generated by the Resources Division decreased substantially from \$563 million in 1987 to \$362 million in 1988. Cash contributions from the Products Division decreased slightly from \$330 million in 1987 to \$311 million in 1988.

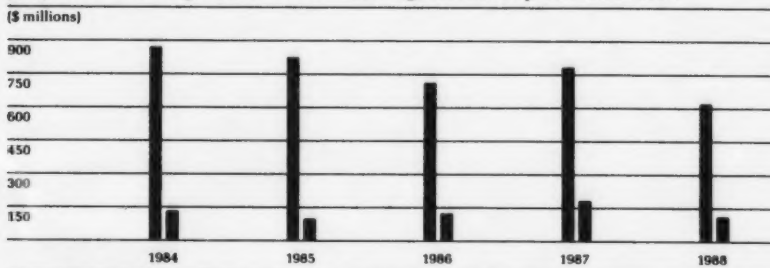
Capital expenditures of \$799 million were 65 per cent above the 1987 level of \$483 million with the increase in investment, including reserves acquisitions, being directed in large part to the Resources Division. The

investment in working capital in 1988 decreased by \$203 million, primarily as a result of lower crude costs in the Products Division; this compared to an increase in working capital in 1987 of \$244 million. Average capital employed by the Corporation in 1988 amounted to \$7 718 million, compared to \$7 353 million a year earlier. Cash flow return on average capital employed decreased from 11.3 per cent in 1987 to 9.2 per cent in 1988, due to the generally lower prices for oil and natural gas.

Cash generated from operations versus earnings*

Cash flow was reduced to \$613 million by the combined effect of weak crude oil and natural gas prices and a stronger Canadian dollar. Earnings declined 33 per cent from 1987.

■ Cash generated from operations
■ Earnings*

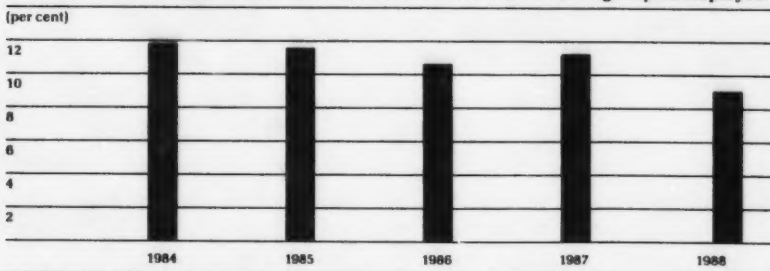


*before extraordinary and unusual items and after dividends on redeemable preferred shares

Profitability

Difficult business conditions resulted in a lower cash flow return on average capital employed.

■ Cash flow return on average capital employed



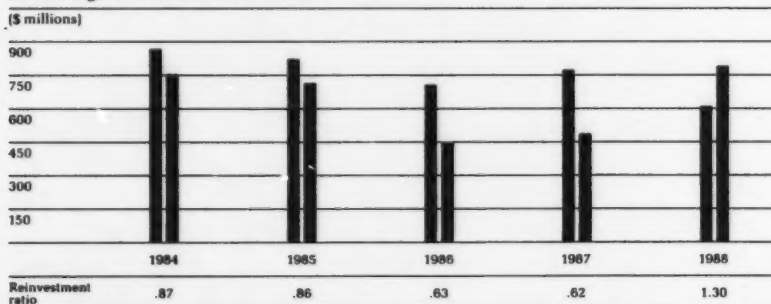
**Investment activities
reflect business
opportunities**

Capital expenditures were increased in 1988 to take advantage of opportunities for enhanced short-term cash flow, while interests in promising, longer-term development projects were maintained. In particular, the focus on conventional oil and gas properties in Western Canada was continued from 1987, with additional funds devoted to purchases of natural gas reserves. Capital expenditures in the refining and marketing business were also increased in 1988, with the objective of improving refining efficiency and upgrading the marketing network. The Corporation continues to invest within the framework of current and prospective levels of cash generated internally from operations and changes in working capital. Capital expenditures for conventional activities in Western Canada were approximately \$129 million for exploration and \$264 million for development. Spending in frontier and international areas was \$80 million and in oil sands \$138 million. Capital expenditures for refining and marketing totalled \$159 million.

Cash flow and reinvestment

Attractive investment opportunities, including the purchase of natural gas reserves, led to a high reinvestment level in 1988.

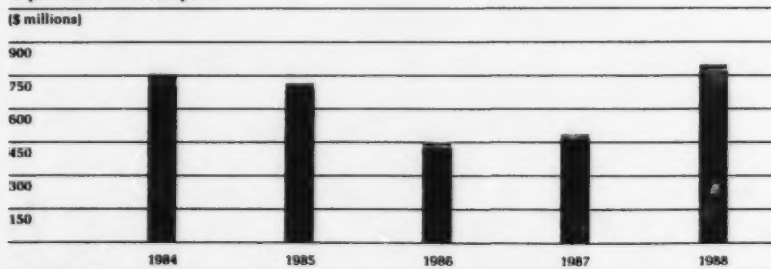
■ Cash generated from operations
■ Capital expenditures



Components of capital spending

Capital expenditures continued to focus on the upstream, with emphasis shifting from exploration to development.

■ Exploration
■ Development
■ Oil sands
■ Refining
■ Marketing
■ Support facilities



Preserving financial integrity

Financial coverage and leverage ratios generally declined in 1988 as a result of difficult business conditions. However, at year end, the Corporation's measure of debt to capital improved to 35.0 per cent from 35.7 per cent at the end of 1987 because investments were closely matched to internally generated cash. Cash flow to debt declined in 1988 from 37.0 to 29.1 per cent as a result of reduced cash flow. Interest coverage stood at 2.4 times at the end of 1988.

During 1988, the Corporation redeemed the remaining redeemable preferred shares at a cost of \$883 million. The redemption was financed by new long-term debt issues of \$361 million and additional short-term debt. The new long-term debt issues lengthened the average maturity of the Corporation's outstanding long-term debt and diminished financial obligations during the early to mid-1990s when major developments will require considerable investment capital. As a result of the share redemption, dividends of \$10 million paid on redeemable preferred shares in 1988 were \$31 million lower than in 1987. Interest expense of \$131 million was \$58 million higher than in the previous year reflecting the refinancing of redeemable preferred shares with debt and generally higher interest rates.

The Corporation remains committed to maintaining the integrity of its financial structure. Cash generated from current activities continues to be sufficient to finance significant ongoing capital investments, and to fulfil Petro-Canada's current fixed financial obligations without undue reliance on external funds.

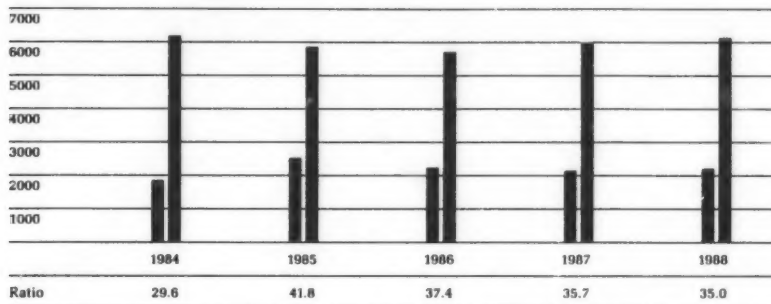
Considerable additional external financing will, however, be required for the Corporation to proceed with major new development projects. Petro-Canada's participation in Hibernia, and its continuing interest in other megaproject developments, will involve substantial financing commitments in future years. Special financing arrangements offered by governments to support such developments will significantly increase Petro-Canada's capability to undertake such ventures without jeopardizing its financial structure. However, caution will be required, given the uncertain business environment expected over the next few years and the long lead-times typical of megaprojects. The financing of new commitments will be carefully planned to avoid undue levels of financial risk and safeguard the Corporation's financial position.

Financial position

The ratio of debt to capital continued to improve as debt levels were held constant in 1988.

■ Debt
■ Capital

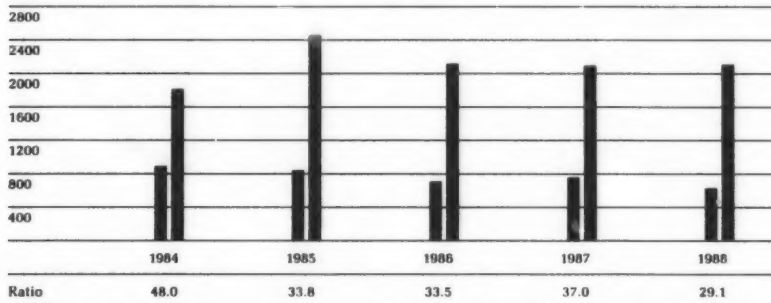
(\$ millions)

**Cash flow to debt**

A significant reduction in cash flow in 1988 caused a decline in this financial indicator.

■ Cash flow
■ Debt

(\$ millions)



GLOSSARY OF FINANCIAL TERMS

Capital	Shareholder's equity plus debt. Shareholder's equity reflects the valuation of redeemable preferred shares at year-end U.S. \$/Cdn. \$ exchange rates.
Capital employed	Total assets less current liabilities excluding short-term notes payable and the current portion of long-term debt. Average capital employed is the average of the current year's and previous year's year-end capital employed.
Capital expenditures	Expenditures on property, plant and equipment less Petroleum Incentive Program grants.
Cash flow return on average capital employed	Working capital provided from operations as disclosed in the financial statements plus tax adjusted interest expense plus investment tax credits divided by average capital employed.
Cash flow to debt	Cash generated from operations divided by debt.
Cash generated from operations	Internally generated cash from operations as disclosed in the financial statements less dividends on redeemable preferred shares.
Debt	Long-term debt including the current portion of long-term debt, short-term notes payable, outstanding cheques less cash, advances on future natural gas deliveries and redeemable preferred shares valued at year-end U.S. \$/Cdn. \$ exchange rates.
Debt to capital	Debt divided by capital.
Interest coverage	Earnings before interest expense, provision for income taxes, extraordinary and unusual items, and dividends on redeemable preferred shares divided by interest expense plus capitalized interest plus dividends on redeemable preferred shares multiplied by $1/(1 - \text{tax rate})$.
Reinvestment ratio	Capital expenditures divided by cash generated from operations.
Return on average capital employed	Earnings before extraordinary and unusual items and dividends on redeemable preferred shares plus tax adjusted interest expense divided by average capital employed.
Return on average shareholder's equity	Earnings before extraordinary and unusual items and after dividends on redeemable preferred shares divided by average shareholder's equity. Average shareholder's equity reflects the valuation of redeemable preferred shares at year-end U.S. \$/Cdn. \$ exchange rates.

Petro-Canada

MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

The financial statements have been prepared by management in accordance with generally accepted accounting principles appropriate in the circumstances. Management is responsible for the other information in the Annual Report, which is consistent, where applicable, with that contained in the financial statements. Management is also responsible for installing and maintaining a system of internal control to provide reasonable assurance that reliable financial information is produced. The Corporation has an internal audit department whose functions include reviewing the system of internal control to ensure that it is adequate and functioning properly.

The Board of Directors is responsible for ensuring that management fulfills its responsibilities for financial reporting and internal control. The Board exercises its responsibilities through the Audit Committee of the Board, a majority of which is composed of directors who are not employees of the Corporation. The committee meets with management, the internal auditors and the external auditors to satisfy itself that responsibilities are properly discharged and to review the financial statements.

The external auditors conduct an independent examination, in accordance with generally accepted auditing standards, and express their opinion on the financial statements. Their examination includes a review and evaluation of the Corporation's system of internal control and appropriate tests and procedures to provide reasonable assurance that the financial statements are presented fairly. The external auditors have full and free access to the Audit Committee of the Board.

AUDITORS' REPORT

To the Honourable Jake Epp, P.C., M.P.
Minister, Energy, Mines and Resources Canada
House of Commons, Ottawa, Ontario

We have examined the consolidated balance sheet of Petro-Canada (incorporated by Special Act of the Parliament of Canada) as at December 31, 1988 and the related consolidated statements of earnings, retained earnings and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of the Corporation as at December 31, 1988 and the results of its operations and changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Further, we have examined the transactions of the Corporation and its consolidated wholly owned subsidiaries that came to our notice in the course of the above mentioned examination, to determine whether they were in accordance with Part X of the Financial Administration Act, the regulations, the charter and by-laws of the Corporation and its consolidated wholly owned subsidiaries and any directives given to the Corporation pursuant to the Act. Our examination of these transactions was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances. In our opinion, these transactions were, in all significant respects, in compliance with the authorities specified.

Calgary, Alberta
February 20, 1989

Arthur Anderson & Co.
Chartered Accountants

As at December 31, 1988
(stated in millions of dollars)

Approved on behalf of the Board

Director

Director

Liabilities and Shareholder's Equity	1988	1987
Current Liabilities		
Short-term notes payable	\$ 968	\$ 313
Accounts payable and accrued liabilities	765	864
Current portion of long-term debt	6	6
	<u>1 739</u>	<u>1 183</u>
Long-Term Debt (Note 6)	1 036	744
Deferred Credits (Note 7)	213	190
Deferred Income Taxes	1 708	1 633
Redeemable Preferred Shares (Note 8)	—	831
Shareholder's Equity (Note 9)	3 915	3 872
	<u>\$ 8 611</u>	<u>\$ 8 453</u>

CONSOLIDATED STATEMENT OF EARNINGSFor the year ended December 31, 1988
(stated in millions of dollars)

	1988	1987
Revenue		
Operating	\$ 4 669	\$ 4 982
Investment and other income	132	97
	<u>4 801</u>	<u>5 079</u>
Expenses		
Crude oil and product purchases	1 939	2 214
Marketing, general and administrative	891	819
Producing and refining	777	727
Depreciation, depletion and amortization	428	412
Federal sales and other taxes	383	394
Interest on long-term debt	71	59
Other interest	60	14
	<u>4 549</u>	<u>4 639</u>
Earnings before Undernoted Items	<u>252</u>	<u>440</u>
Provision for Income Taxes (Note 10)		
Deferred	74	164
Current	52	63
	<u>126</u>	<u>227</u>
Earnings before Extraordinary Item and Dividends on Redeemable Preferred Shares	<u>126</u>	<u>213</u>
Extraordinary Item (Note 11)	<u>22</u>	<u>-</u>
Net Earnings before Dividends on Redeemable Preferred Shares	<u>104</u>	<u>213</u>
Dividends on Redeemable Preferred Shares (Note 8)	<u>10</u>	<u>41</u>
Net Earnings after Dividends on Redeemable Preferred Shares	<u>\$ 94</u>	<u>\$ 172</u>

CONSOLIDATED STATEMENT OF RETAINED EARNINGSFor the year ended December 31, 1988
(stated in millions of dollars)

	<u>1988</u>	<u>1987</u>
Retained Earnings (Deficit) at Beginning of Year	\$ (289)	\$ (450)
Net earnings before dividends on redeemable preferred shares	104	213
Dividends on redeemable preferred shares	(10)	(41)
Exchange adjustment on redemption of redeemable preferred shares	<u>(51)</u>	<u>(11)</u>
Retained Earnings (Deficit) at End of Year	<u>\$ (246)</u>	<u>\$ (289)</u>

CONSOLIDATED STATEMENT OF CHANGES IN FINANCIAL POSITIONFor the year ended December 31, 1988
(stated in millions of dollars)

	1988	1987
Internally Generated Cash		
Working capital provided from operations (Note 12)	\$ 624	\$ 784
Proceeds from sale of property, plant and equipment	22	46
Advances on future natural gas deliveries	(23)	(11)
Internally generated cash from operations	623	819
Decrease (increase) in operating working capital (Note 13)	203	(244)
	826	575
Investment Activities		
Expenditures on property, plant and equipment	799	483
Increase in investments, net	52	142
Increase in deferred charges, net	18	1
	869	626
Financing Activities and Dividends		
Increase in short-term notes payable, net	655	313
Proceeds from issue of long-term debt	361	-
Redemption of redeemable preferred shares	(883)	(102)
Dividends on redeemable preferred shares	(10)	(41)
Reduction of long-term debt	(6)	(21)
	117	149
Increase in Cash	74	98
Cash and Short-Term Deposits (Deficiency) at Beginning of Year	10	(88)
Cash and Short-Term Deposits at End of Year	<u>\$ 84</u>	<u>\$ 10</u>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 1988
(stated in millions of dollars)

Note 1: Summary of Significant Accounting Policies

(a) Basis of Consolidation

The consolidated financial statements include the accounts of Petro-Canada, an agent of Her Majesty in right of Canada, and of all subsidiary companies ("the Corporation") except Canertech Inc., which is excluded for the reason described in Note 3.

The excess of the consideration paid for the shares of subsidiaries over the underlying net book values at the dates of acquisition is attributed to the related assets acquired and is amortized over the life of these assets.

(b) Inventories

Inventories are stated at the lower of cost and net realizable value. Cost of crude oil, refined products and merchandise is determined on a "first-in, first-out" basis.

(c) Investments

The Corporation accounts for investments in companies over which it has significant influence on the equity method. Other long-term investments are accounted for on the cost method.

(d) Property, Plant and Equipment

The Corporation accounts for its investment in oil and gas properties on the full cost method whereby all costs relating to the exploration for and development of oil and gas reserves are capitalized. Such costs include those related to lease acquisitions, geological and geophysical activities, lease rentals on non-producing properties, drilling both productive and non-productive wells and overhead related to exploration and development. Separate cost centres have been established for each country in which the Corporation has an interest in oil and gas properties. The Corporation applies a "ceiling test" to each of its producing oil and gas cost centres to ensure that such costs do not exceed the total of the estimated future net revenues from production of proven reserves, the unimpaired costs of certain projects in Canadian frontier areas and the unimpaired costs of unevaluated properties. The estimate of future net revenues is based upon prices and operating costs in effect at the balance sheet date. In addition a consolidated ceiling test provides for future administrative overhead, financing costs and income taxes.

Costs are accumulated separately for the Syncrude Project, producing in situ and other oil sands leases. Overburden removal costs relating to oil sands which will be mined in future years are deferred and are charged to earnings when the related oil sands are mined.

Substantially all of the Corporation's exploration and production activities are conducted jointly with others. Only the Corporation's proportionate interest in such activities is reflected in the financial statements.

The interest cost of debt attributable to the construction of major new facilities is capitalized during the construction period.

(e) Depreciation, Depletion and Amortization

Costs incurred in producing oil and gas cost centres, other than unimpaired costs of certain projects in Canadian frontier areas and of unevaluated properties, and costs incurred on the Syncrude Project and producing in situ oil sands leases are depreciated or depleted separately on the unit of production method based on estimated proven recoverable oil and gas reserves before royalties. For purposes of calculating depreciation and depletion, natural gas production and reserves are converted to equivalent units of crude oil based on the relative energy content of each commodity.

Costs incurred in non-producing oil and gas cost centres and other oil sands leases are subject to review for impairment. Any impairment is charged to earnings. When exploration proves to be

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 1988
(stated in millions of dollars)

Note 1: (Continued)

successful, and economic viability has been established, the unimpaired balance is depleted on the unit of production method when production commences.

Depreciation of other plant and equipment is provided on either the unit of production method or the straight line method as appropriate. Straight line depreciation rates are based on the estimated service lives of the related assets.

(f) Income Taxes

The Corporation makes full provision for income taxes deferred as the result of claiming depreciation, exploration, development and other costs for income tax purposes which differ from the related amounts charged to earnings.

(g) Translation of Foreign Currency

Current assets, except inventories and prepaid expenses, current liabilities and long-term debt are translated at rates of exchange in effect at the balance sheet date. Long-term assets, inventories, prepaid expenses, deferred income taxes, redeemable preferred shares and revenue and expense items are translated at rates of exchange in effect at the respective transaction dates. Depreciation, depletion and amortization expense reflects rates of exchange in effect when the related assets were acquired.

The resulting exchange gains or losses are included in earnings, except for unrealized exchange gains or losses arising on translation of long-term debt, which are deferred and amortized over the remaining term of the debt, and realized losses on redemption of redeemable preferred shares, which are charged directly to retained earnings.

Foreign operations are integrated with the Corporation's other activities and are translated in the manner described above.

Note 2: Inventories

	1988	1987
Crude oil, refined products and merchandise	\$ 495	\$ 657
Materials and supplies	65	64
	<u>\$ 560</u>	<u>\$ 721</u>

Note 3: Investments

	1988	1987
At equity		
Westcoast Energy Inc.	\$ 269	\$ 219
Petro-Canada Centre	189	188
Sedpex Inc.	18	38
Other	22	20
At cost		
Mortgages and other investments	41	44
	<u>\$ 539</u>	<u>\$ 509</u>

Westcoast Energy Inc. ("Westcoast")

At December 31, 1988 the Corporation held approximately 37% (1987-31%) of the outstanding common shares of Westcoast with a quoted market value of \$280 million (1987-\$250 million).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 1988
(stated in millions of dollars)

Note 3: (Continued)

Petro-Canada Centre

The Corporation holds 50% of a joint venture which owns Petro-Canada Centre, an office complex in Calgary. The Corporation has entered into a long-term lease for use of a portion of the complex and, as at December 31, 1988, has guaranteed \$135 million of long-term debt related to the facility.

Sedpex Inc.

The Corporation holds 50% of the outstanding common shares of Sedpex Inc., a company which owns a semi-submersible drilling vessel.

Canertech Inc. ("Canertech")

The accounts of Canertech, a wholly-owned subsidiary company, have been excluded from consolidation because a formal plan exists to dispose of the investment in the subsidiary. In response to a directive by the Government of Canada, the Corporation incorporated Canertech in 1981 to develop alternate energy sources. At that time the Government indicated its intention of purchasing the Corporation's investment at cost and establishing Canertech as an independent Crown corporation. The Corporation is proceeding with the implementation of a Government directive to bring about the dissolution of Canertech. The Corporation's investment in Canertech is carried in the accounts at its original cost of one dollar.

Note 4: Property, Plant and Equipment

	1988			1987	Capital Expenditures	
	Cost	Accumulated Depreciation, Depletion and Amortization	Net	Net	1988	1987
Natural resources						
Oil and gas						
Canada	\$ 5 657	\$ 2 194	\$ 3 463	\$ 3 250	\$ 441	\$ 239
Foreign						
-producing	67	49	18	19	3	—
-non-producing	133	106	27	17	23	12
Oil sands						
Syncrude Project	751	153	598	577	42	44
Producing in situ	221	21	200	115	91	30
Other oil sands	212	212	—	—	5	5
Natural gas liquids	210	89	121	128	4	2
Other	105	81	24	29	2	4
	7 356	2 905	4 451	4 135	611	336
Refining and marketing	2 495	550	1 945	1 921	159	122
Other property, plant and equipment	299	161	138	141	29	25
	<u>\$ 10 150</u>	<u>\$ 3 616</u>	<u>\$ 6 534</u>	<u>\$ 6 197</u>	<u>\$ 799</u>	<u>\$ 483</u>

At December 31, 1988, \$3 250 million (1987—\$3 074 million) of Canada oil and gas net costs were subject to depreciation and depletion.

Capital expenditures for the year include \$12 million (1987—\$7 million) of capitalized interest expense.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 1988

(stated in millions of dollars)

Note 5: Deferred Charges

	1988	1987
At cost		
Oil sands overburden removal costs	\$ 39	\$ 40
Less portion related to oil sands to be mined within one year	17	16
	22	24
Deferred pension funding	27	13
At amortized cost		
Deferred financing costs	17	14
Other	17	16
	<u>\$ 83</u>	<u>\$ 67</u>

Note 6: Long-Term Debt

	Maturity	1988	1987
In Canadian dollars			
8.25% unsecured notes	1993	\$ 11	\$ 11
In United States dollars			
7.75% unsecured notes (U.S.\$13 million)	1993	15	18
LIBOR less 0.8% unsecured notes (U.S.\$125 million)	1995	149	162
9% unsecured notes (U.S.\$26 million)	1995	31	39
7.25% unsecured debentures (U.S.\$200 million)	1996	239	260
9.50% unsecured debentures (U.S.\$200 million)	2003	239	—
8.25% unsecured debentures (U.S.\$200 million)	2016	239	260
9.70% unsecured debentures (U.S.\$100 million)	2018	119	—
		<u>1 042</u>	<u>750</u>
Less current portion		6	6
		<u>\$ 1 036</u>	<u>\$ 744</u>

Repayment of long-term debt

The minimum repayment of long-term debt in each of the next five years is as follows:

1989—\$6 million 1990—\$6 million 1991—\$7 million 1992—\$7 million 1993—\$24 million

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 1988

(stated in millions of dollars)

Note 7: Deferred Credits

	1988	1987
Advances on future natural gas deliveries	\$ 95	\$ 118
Translation adjustment on long-term debt	88	33
Long-term liabilities	30	39
	<u>\$ 213</u>	<u>\$ 190</u>

Note 8: Redeemable Preferred Shares

During 1988 a subsidiary redeemed 7 092 983 shares (1987-779 000 shares) for a consideration of U.S. \$709 million (1987-U.S. \$78 million). The 1988 redemption comprised virtually all the remaining outstanding shares.

Note 9: Shareholder's Equity

Authorized Capital

(a) 71 188 common shares with a par value of one hundred thousand dollars each, and

(b) Preferred shares issued to the Government of Canada provided that the amount of such shares together with any loans received, and outstanding, from the Consolidated Revenue Fund of the Government of Canada is not in excess of one billion dollars. These shares have a par value of one dollar each, are redeemable at par at the option of the Corporation, carry no stated rate of dividend and are non-cumulative.

Issued (to the Government of Canada)

	Number of Shares	1988	1987
Common Shares	<u>31 883</u>	\$ 3 188	\$ 3 188
Preferred Shares	<u>972 771 853</u>	973	973
Total Capital at Beginning and End of Year		4 161	4 161
Deficit at End of Year		(246)	(289)
		<u>\$ 3 915</u>	<u>\$ 3 872</u>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(stated in millions of dollars)

Note 10: Income Taxes

The provision for income taxes of \$126 million (1987-\$227 million) represents an effective rate of 50% (1987-51.6%) on earnings before income taxes of \$252 million (1987-\$440 million). The computation of the provision, which requires adjustment to earnings before income taxes for non-taxable and non-allowable items, is as follows:

	1988	1987
Earnings before income taxes	\$ 252	\$ 440
Add (deduct)		
Royalties and other payments to provincial governments	135	160
Federal allowances		
Resource allowance	(107)	(144)
Tax depletion	(38)	(36)
Non-deductible depreciation, depletion and amortization	88	99
Non-taxable gains	(14)	(10)
Equity in earnings of affiliates	(21)	(25)
Other	4	(8)
Earnings as adjusted before income taxes	<u>\$ 299</u>	<u>\$ 476</u>
Canadian Federal income tax at 42.4% (1987-46.6%) applied to earnings as adjusted	\$ 127	\$ 222
Provincial and other income taxes, net of federal abatement	4	9
Provincial income tax rebates	(5)	(4)
Provision for income taxes	<u>\$ 126</u>	<u>\$ 227</u>

Note 11: Extraordinary Item

Due to uncertain dayrates and low utilization of offshore drilling rigs, the Corporation has written down the carrying value of its investment in Sedpex Inc. (Note 3). The amount of this charge to earnings is \$22 million including related income taxes of \$2 million.

Note 12: Working Capital Provided from Operations

	1988	1987
Earnings before extraordinary item and dividends on redeemable preferred shares	\$ 126	\$ 213
Add (deduct)		
Depreciation, depletion and amortization	428	412
Deferred income taxes	74	164
Equity earnings, net of dividends received	2	(4)
Other	(6)	(1)
	<u>\$ 624</u>	<u>\$ 784</u>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 1988

(stated in millions of dollars)

Note 13: Decrease (Increase) in Operating Working Capital

	1988	1987
Accounts receivable	\$ 158	\$ (18)
Inventories	161	(168)
Income taxes recoverable	(32)	16
Prepaid expenses	12	(18)
Accounts payable and accrued liabilities	(99)	(69)
Other	3	13
	<u>\$ 203</u>	<u>\$ (244)</u>

Operating working capital is comprised of working capital other than cash and short-term deposits, short-term notes payable and current portion of long-term debt.

Note 14: Pension Plans

The Corporation's plans are defined benefit plans with the benefits generally based upon years of service and average salary during the final years of employment. They are funded by the Corporation based upon the advice of an independent actuary.

Plan Status as at December 31

	1988	1987
Actuarial value of assets	\$ 445	\$ 394
Pension obligation	427	382
Net pension asset	<u>\$ 18</u>	<u>\$ 12</u>

The net pension asset is amortized to earnings over the expected average remaining service life of the employees covered by the plans, which is currently 13 years.

Pension funding and expense amounted to \$32 million (1987-\$32 million) and \$16 million (1987-\$17 million) respectively.

Note 15: Related Party Transactions

Transactions with the Government of Canada and its agencies are in the normal course of business and are therefore on the same terms as those accorded to non-related parties.

Note 16: Segmented Information

The Corporation operates in two business segments:

Natural resources, comprising: exploration, development, production, transportation and marketing activities for crude oil, natural gas, field liquids, sulphur and oil sands; and extraction of liquids from natural gas.

Refining and marketing, comprising: purchase and sale of crude oil; refining crude oil into oil products; and distribution and marketing of these and other purchased products.

Financial information by business segment is presented in the following table as though each segment were a separate business entity. Inter-segment transfers of products, which are accounted for at market value, are eliminated on consolidation. Corporate and other includes investment income, interest expense and unallocated general corporate revenues and expenditures. Corporate and other assets are principally cash and short-term deposits, investments in other companies and general corporate assets.

	Natural Resources		Refining and Marketing		Corporate and Other		Consolidated	
	1988	1987	1988	1987	1988	1987	1988	1987
Revenue								
Sales to customers and other revenues	\$ 473	\$ 571	\$ 4 245	\$ 4 461	\$ 83	\$ 47	\$ 4 801	\$ 5 079
Inter-segment sales	516	567	—	—	—	—	—	—
Segment revenue	\$ 989	\$ 1 138	\$ 4 245	\$ 4 461	\$ 83	\$ 47		
Earnings								
Operating earnings before depreciation, depletion and amortization	\$ 415	\$ 623	\$ 336	\$ 327	\$ 60	\$ (25)	\$ 811	\$ 925
Depreciation, depletion and amortization	(280)	(266)	(142)	(139)	(6)	(7)	(428)	(412)
Interest	—	—	—	—	(131)	(73)	(131)	(73)
Provision for income taxes	(87)	(195)	(92)	(93)	53	61	(126)	(227)
Earnings (loss) before extraordinary item and dividends on redeemable preferred shares	\$ 48	\$ 162	\$ 102	\$ 95	\$ (24)	\$ (44)	\$ 126	\$ 213
Capital expenditures								
Property, plant and equipment	\$ 611	\$ 336	\$ 159	\$ 122	\$ 29	\$ 25	\$ 799	\$ 483
Investments	—	—	1	—	51	142	52	142
Deferred charges	(1)	(8)	2	(4)	17	13	18	1
	\$ 610	\$ 328	\$ 162	\$ 118	\$ 97	\$ 180	\$ 869	\$ 626
Total assets	\$ 4 729	\$ 4 431	\$ 3 101	\$ 3 436	\$ 781	\$ 586	\$ 8 611	\$ 8 453
Capital employed	\$ 4 509	\$ 4 207	\$ 2 585	\$ 2 815	\$ 752	\$ 567	\$ 7 846	\$ 7 589

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 1988

(stated in millions of dollars)

Note 17: Comparative Figures

Certain reclassifications have been made to the 1987 comparative figures to conform with the current year's presentation.

Note 18: Commitments and Contingencies

(a) Commitments

The Corporation has leased property and equipment under various long-term operating leases for periods up to 2008. The minimum annual rentals for non-cancellable operating leases are estimated at \$53 million in 1989, \$52 million in 1990, \$45 million in 1991, \$45 million in 1992, \$39 million in 1993 and \$19 million per year thereafter until 2008.

(b) Contingencies

The Corporation is involved in litigation and claims associated with normal operations. Management is of the opinion that any resulting settlements would not materially affect the financial position of the Corporation.

CONVERSION TABLE

1 cubic metre	=	6.29 barrels
1 cubic metre	=	35.31 cubic feet
1 litre	=	0.22 imperial gallons
1 hectare	=	2.47 acres
1 tonne	=	2 205 pounds
1 kilometre	=	0.62 miles

RESERVES INFORMATION

(proven reserves, net after royalties)

	1988			1987		
	Developed	Undeveloped	Total	Developed	Undeveloped	Total
Crude oil and natural gas liquids (thousands of m ³)						
Conventional crude oil	29 809	2 042	31 851	27 373	2 097	29 470
Synthetic crude oil	31 531	3 216	34 747	29 865	3 906	33 771
Bitumen	1 325	3 307	4 632	1 265	3 399	4 664
Natural gas liquids	5 237	624	5 861	4 447	977	5 424
Total	67 902	9 189	77 091	62 950	10 379	73 329
Natural gas (millions of m ³)	59 104	20 150	79 254	57 873	20 350	78 223

	1988			1987		
	Oil (thousands of m ³)	NGL (thousands of m ³)	Gas (millions of m ³)	Oil (thousands of m ³)	NGL (thousands of m ³)	Gas (millions of m ³)
Balance, beginning of year	67 905	5 424	78 223	68 041	5 263	77 323
Revisions of previous estimates	7 571	1 055	916	3 678	741	4 142
Extensions and discoveries	349	—	964	637	—	386
Purchases/sales	—	—	3 229	—	—	—
Production	(4 595)	(618)	(4 078)	(4 451)	(580)	(3 628)
Balance, end of year	71 230	5 861	79 254	67 905	5 424	78 223

Notes:

1. Reserves quantities in the Annual Report, excluding synthetic crude oil, are reported based on estimates consistent with the knowledge of the characteristics and extent of underlying productive formations at each year end.
2. The above figures include Petro-Canada's 17% interest in the synthetic crude oil reserves of Syncrude. These reserves are based on the demonstrated production capacity of the Syncrude plant and an estimate of the incremental production attributable to the capital program which was completed in 1988, both calculated over the remaining term of the current operating permit to the year 2013.

The Syncrude project is subject to a royalty agreement between the Province of Alberta and the Syncrude participants whereby the Province has the right to 50% of Syncrude's deemed net profit. The Province has an option to convert its royalty to a 7.5% gross overriding royalty.

The net after royalty reserves of Syncrude are based on an estimated average royalty rate for the life of the project using current prices and operating costs.

Petro-Canada
FIVE YEAR FINANCIAL SUMMARY
(stated in millions of dollars)

	1988	1987	1986	1985	1984
Summary of Earnings					
Revenue	\$ 4 801	\$ 5 079	\$ 5 172	\$ 5 381	\$ 4 988
Expenses	4 549	4 639	4 741	4 868	4 376
	252	440	431	513	612
Add (deduct)					
Provision for income taxes	(126)	(227)	(249)	(341)	(385)
Minority interest	-	-	-	2	5
Earnings before extraordinary and unusual items and dividends on redeemable preferred shares	126	213	182	174	232
Extraordinary and unusual items	22	-	-	865	-
Net earnings (loss) before dividends on redeemable preferred shares	104	213	182	(691)	232
Dividends on redeemable preferred shares	10	41	59	78	100
Net earnings (loss) after dividends on redeemable preferred shares	\$ 94	\$ 172	\$ 123	\$ (769)	\$ 132
Other Financial Data					
Cash generated from operations	\$ 613	\$ 778	\$ 711	\$ 828	\$ 868
Expenditures on property, plant and equipment	799	488	614	1 059	1 131
Petroleum Incentive Program grants	-	5	166	349	380
Acquisitions including minority interests	-	-	301	1 010	(2)
Total assets	8 611	8 453	8 139	8 846	8 966
Average capital employed	7 718	7 353	7 226	7 746	7 780
Working capital (deficiency)	(284)	497	448	397	905
Long-term debt (Note 3)	1 042	750	818	289	157
Redeemable preferred shares	-	831	922	1 224	1 312
Shareholder's equity	3 915	3 872	3 711	3 642	4 478
Annual Operating Revenues					
Resources Division					
Crude oil and natural gas liquids					
Conventional crude oil	\$ 307	\$ 413	\$ 336	\$ 613	\$ 585
Synthetic crude oil	166	192	167	279	214
Bitumen	9	19	13	14	-
Field natural gas liquids	46	57	50	80	67
	528	681	566	986	866
Natural gas	222	203	219	292	284
Sulphur	23	25	31	34	27
Natural gas liquids from straddle plants	152	145	192	235	246
Other	64	84	72	89	116
Total	\$ 989	\$ 1 138	\$ 1 080	\$ 1 636	\$ 1 539

	1988	1987	1986	1985	1984
Annual Operating Revenues (Continued)					
Products Division					
Gasolines	\$ 2 050	\$ 2 240	\$ 2 280	\$ 2 232	\$ 1 814
Distillates	1 284	1 384	1 549	1 350	1 025
Other including petrochemicals	911	837	759	768	592
Total	\$ 4 245	\$ 4 461	\$ 4 588	\$ 4 350	\$ 3 431
Expenditures on Property, Plant and Equipment					
Resources Division					
Exploration					
Frontier	\$ 54	\$ 41	\$ 245	\$ 442	\$ 601
Western provinces	129	101	62	145	128
Foreign	23	12	11	19	30
Development					
Western provinces	264	108	99	166	104
Foreign	3	—	1	6	6
Oil Sands					
Syncrude	42	44	47	60	31
Other	96	35	17	30	53
	611	341	482	868	953
Products Division					
Refining	80	49	55	115	90
Marketing	79	73	57	50	33
	159	122	112	165	123
Support facilities					
	29	25	20	26	55
	799	488	614	1 059	1 131
Petroleum Incentive Program grants					
	—	5	166	349	380
Total	\$ 799	\$ 483	\$ 448	\$ 710	\$ 751
Reinvestment ratio					
	1.30	0.62	0.63	0.86	0.87
Financial Indicators (per cent)					
Performance					
Return on average capital employed	2.6	3.4	3.0	2.4	3.1
Cash flow return on average capital employed	9.2	11.3	10.7	11.7	11.9
Return on average shareholder's equity	3.0	4.7	3.5	2.5	3.2
Leverage					
Interest coverage (times)	2.4	3.2	2.6	2.8	2.9
Debt plus redeemable preferred shares to capital	35.0	35.7	37.4	41.8	29.6
Cash flow to debt plus redeemable preferred shares	29.1	37.0	33.5	33.8	48.0

Notes:

1. Financial and operating results are included from October 1, 1985 for the operations of the assets acquired from Gulf Canada Limited except for the Edmonton refinery, and April 1, 1986 for the operations of the Edmonton refinery.

2. Certain reclassifications have been made to the figures previously reported to reflect subsequent changes in reporting presentation.

3. Long-term debt includes current maturities.

Petro-Canada
FIVE YEAR OPERATING SUMMARY

	1988	1987	1986	1985	1984
Oil and Gas Landholdings (gross/net) (millions of hectares)					
Canadian provinces					
Alberta – Oil and natural gas rights	2.2/1.0	2.2/1.1	2.3/1.1	2.6/1.2	3.0/1.4
– Oil sands rights	1.0/0.3	1.0/0.4	1.1/0.4	1.0/0.4	0.9/0.3
British Columbia	0.9/0.5	0.9/0.5	1.1/0.6	1.4/0.7	1.3/0.7
Saskatchewan	0.3/0.2	0.2/0.1	0.2/0.2	0.2/0.1	0.2/0.1
Other provinces	0.1/0.1	0.1/0.1	0.1/0.1	0.2/0.1	0.3/0.2
	4.5/2.1	4.4/2.2	4.8/2.4	5.4/2.5	5.7/2.7
Frontier Canada	6.5/4.7	8.0/5.4	14.2/8.0	33.2/16.5	41.6/20.5
International	3.9/1.5	1.3/0.7	1.2/0.5	3.4/1.1	2.8/0.4
Total	14.9/8.3	13.7/8.3	20.2/10.9	42.0/20.1	50.1/23.6
Wells Drilled (gross/net)					
Canadian provinces – exploratory wells					
Oil	20/14	20/11	21/13	42/30	65/45
Gas	35/26	10/6	34/15	50/27	25/11
Dry	33/22	35/25	42/24	75/53	74/47
	88/62	65/42	97/52	167/110	164/103
Canadian provinces – development wells					
Oil	176/91	199/74	283/51	482/169	344/134
Gas	90/39	45/27	32/10	47/26	16/6
Oil sands	266/133	75/38	4/2	-/-	193/96
Dry	15/7	20/13	14/7	48/21	24/10
	547/270	339/152	333/70	577/216	577/246
Frontier Canada and international - exploratory and development wells					
Oil	3/2	3/1	9/2	16/4	9/2
Gas	1/0	-/-	9/3	10/4	9/2
Dry	8/2	6/2	19/6	26/7	25/8
	12/4	9/3	37/11	52/15	43/12
Total	647/336	413/197	467/133	796/341	784/361
Proven Reserves (net, before royalties/after royalties)					
Natural gas (billions of m ³)	97.9/79.3	96.9/78.2	96.7/77.3	98.8/77.9	120.4/100.4
Sulphur (millions of tonnes)	5.7/4.8	5.4/4.6	5.2/4.4	5.5/4.6	4.8/4.0
Crude oil and natural gas liquids (millions of m ³)					
Conventional crude oil	39.4/31.9	37.2/29.5	33.9/30.1	41.3/30.4	48.1/34.3
Synthetic crude oil	40.9/34.7	39.7/33.6	39.2/33.3	39.1/33.2	25.4/21.6
Bitumen	4.8/4.6	4.9/4.6	4.9/4.6	4.5/4.3	1.1/1.0
Natural gas liquids	7.4/5.9	7.2/5.4	7.1/5.3	7.5/5.5	6.4/4.7
Total	92.5/77.1	89.0/73.3	90.1/73.3	92.4/73.4	81.0/61.6

	1988	1987	1986	1985	1984
Daily Production (net, before royalties/after royalties)					
Natural gas (millions of m ³)	13.7/11.1	12.3/9.9	10.2/8.2	11.6/9.1	10.8/9.0
Sulphur (thousands of tonnes)	1.0/0.8	1.0/0.8	0.9/0.8	0.9/0.8	1.4/1.2
Crude oil and field natural gas liquids (thousands of m³)					
Conventional crude oil	10.0/8.1	10.1/8.1	10.1/8.0	10.1/7.7	10.7/7.8
Synthetic crude oil	4.1/4.0	3.7/3.6	3.5/3.4	3.5/3.1	2.3/2.1
Bitumen	0.5/0.5	0.5/0.5	0.6/0.6	0.2/0.2	-/-
Field natural gas liquids	2.1/1.6	2.1/1.6	2.1/1.5	1.8/1.3	1.5/1.1
Total	16.7/14.2	16.4/13.8	16.3/13.5	15.6/12.3	14.5/11.0
Natural gas liquids production from straddle plants including ethane (thousands of m³)	6.4	6.3	6.5	5.7	6.3
Average sales prices					
Crude oil and field natural gas liquids (\$ per m ³)	102	140	115	227	213
Natural gas (\$ per thousand m ³)	57	57	75	87	88
Marketing					
Retail outlets at year end	3 429	3 677	3 844	3 965	2 485
Petroleum product sales (thousands of m³ per day)					
Gasolines	19.4	20.3	20.3	16.3	13.9
Distillates	16.1	16.7	16.2	12.2	9.6
Heavy fuel oil	2.6	2.5	2.4	2.6	2.4
Other including petrochemicals	5.7	6.1	5.5	4.4	3.9
Total	43.8	45.6	44.4	35.5	29.8
Refining					
Refinery crude capacity at year end (thousands of m ³ per day)	60.6	64.0	64.0	46.2	31.6
Crude oil processed by Petro-Canada (thousands of m ³ per day)	48.5	48.4	47.2	34.2	27.6
Average refinery utilization (per cent) (Note 3)	77	76	74	78	86
Employees					
Number at year end	7 373	7 204	7 140	9 747	6 798

Notes:

1. Certain reclassifications have been made to the figures previously reported to reflect subsequent changes in reporting presentations.
2. Operating results are included from October 1, 1985 for the operations of the assets acquired from Gulf Canada Limited except for the Edmonton

- refinery, and from April 1, 1986 for the operations of the Edmonton refinery.
3. Average refinery utilization takes into account, where applicable, changes in refinery crude capacity that occurred during the year.

BOARD OF DIRECTORS

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and Chief Executive Officer
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Calgary, Alberta

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and Chief Executive Officer

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and Chief Operating Officer

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Robert J. Mayo
President
Petro-Canada Products Division
(retired January 1989)

James M. Stanford
President
Petro-Canada Resources Division

Barry D. Stewart
President
Petro-Canada Products Division
(appointed January 1989)

Wesley R. Twiss
Senior Vice-President,
Finance and Planning
(appointed January 1989)

* Audit Committee Member

† Executive Committee Member